# WhisperKOOL EXTREME OWNER'S MANUAL

WhisperKOOL™
*The Coolest Thing In Wine Storage*

EXti 033114

***We manufacture, test and certify 100% of our wine cooling units in the USA. By sourcing the best components and closely controlling our manufacturing processes, we can assure the highest-quality, lowest defect manufacturing rates in the industry.***

Copyright © 2012. WhisperKOOL. All rights reserved.

WhisperKOOL copyrights this manual, the product design, and the design concepts, with all rights reserved. Your rights with regard to the hardware and manual are subject to the restrictions and limitations imposed by the copyright laws of the USA. Under copyright laws, this manual may not be copied, reproduced, translated, transmitted, or reduced to any printed or electronic medium or to any machine-readable form, for any purpose, in whole or in part, without the written consent of WhisperKOOL.

Every effort has been made to ensure that the information in this manual is accurate. WhisperKOOL is not responsible for printing or clerical errors.

WhisperKOOL reserves the right to make corrections or improvements to the information provided and to the related hardware at any time, without notice.

Vinothèque and WhisperKOOL are registered trademarks, and ECE is a trademark of WhisperKOOL. All rights reserved.

Mention of third-party products is for informational purposes only and constitutes neither an endorsement nor a recommendation. WhisperKOOL assumes no liability with regard to the performance or use of these products.

REV 02

# TABLE OF CONTENTS


**Quick Reference Guide**
- Unit ..... 2
- Controller ..... 4
- Fan Speed & Specifications ..... 5

**Introduction** ..... 6

**Receiving & Inspecting the Unit** ..... 7

**Quick Start Guide** ..... 8

**Preparing the Wine Cellar** ..... 9

**Through-the-Wall Installation**
- Pre-Installation ..... 12
- Preparing the Installation Location ..... 13
- Preparing the Unit for Installation ..... 14
- Optional Exterior Grille ..... 15
- Through-the-Wall Installation ..... 16

**Active Humidity Option Over View** ..... 18

**Humidistat Installation** ..... 19

**Ducted Installation**
- Ducting Overview ..... 21
- Ducting Configurations ..... 22
- Installing the Duct Plenums ..... 24

**Remote Controller Installation** ..... 25

**Drain Line** ..... 27

**Liquid Measuring Thermostat** ..... 28

**Multi Speed Control** ..... 29

**Unit Operation: Standard and Remote** ..... 30

**Standard Control Functions** ..... 31

**Standard Wire Schematic** ..... 34

**Remote Controller Functions** ..... 35

**Remote Wire Schematic** ..... 38

**Maintenance Schedule** ..... 39

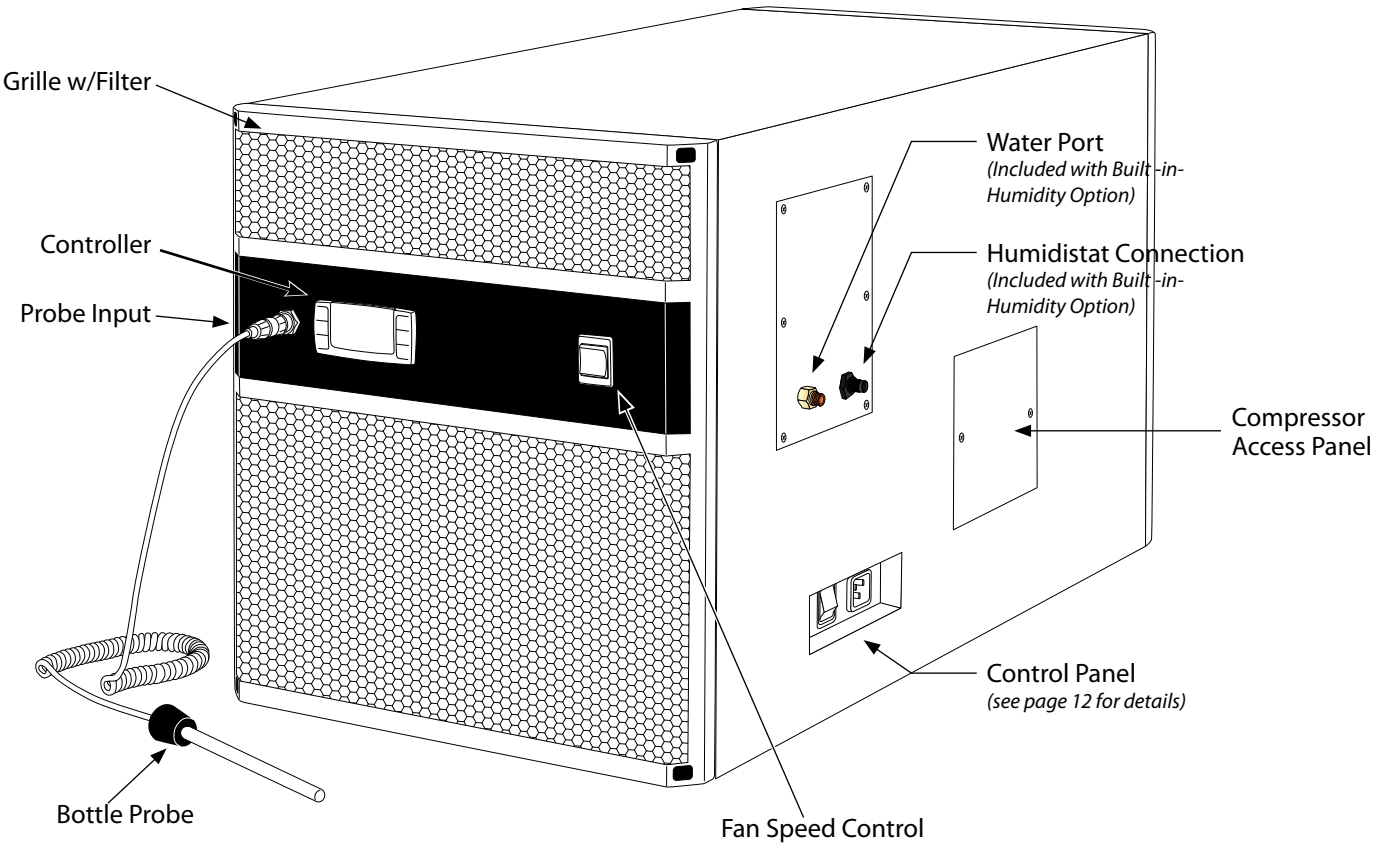
**Troubleshooting Guide** ..... 40

**Technical Assistance & Accessories** ..... 42

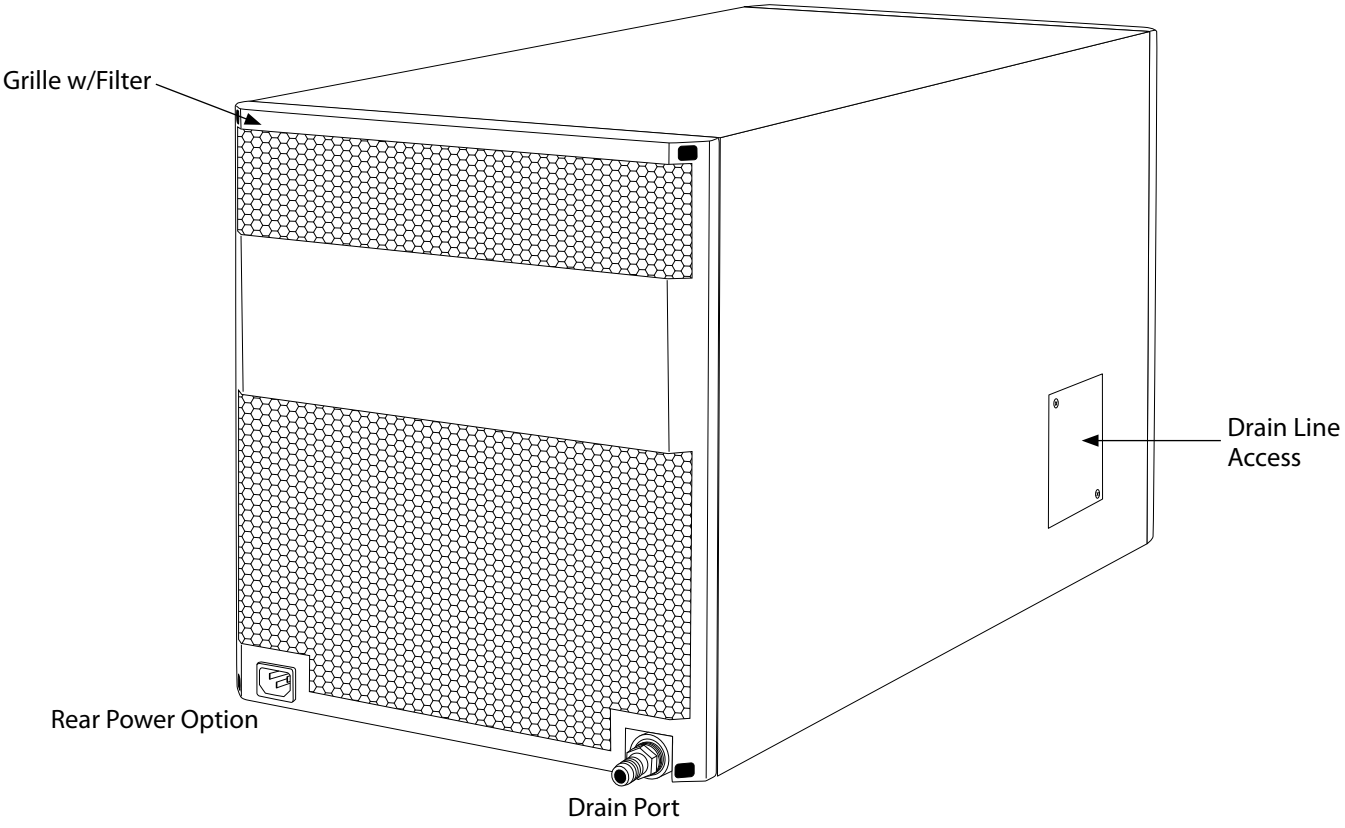
**Installation Terms and Conditions** ..... 43

# QUICK REFERENCE GUIDE

## Front / Side View

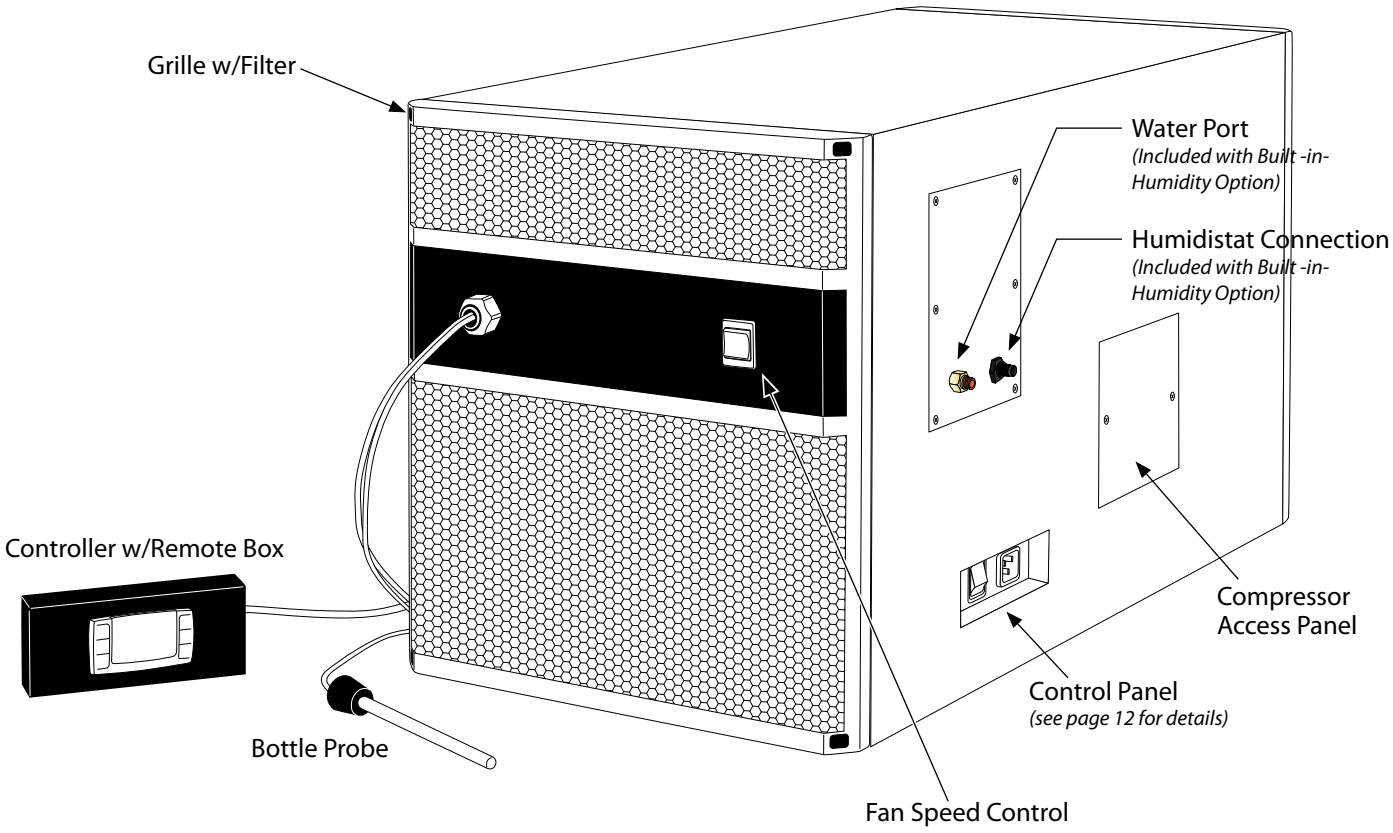



## Rear / Side View

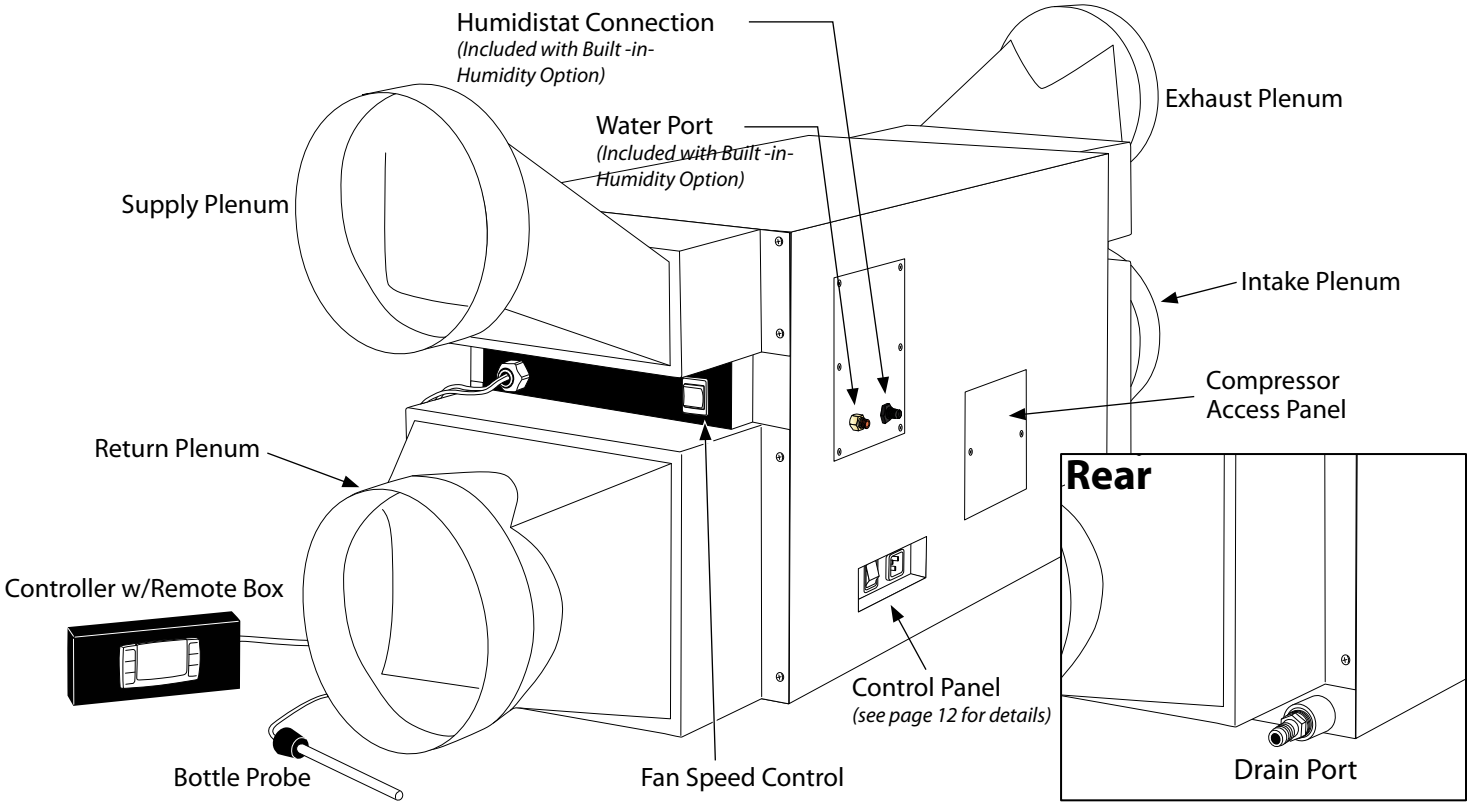


# QUICK REFERENCE GUIDE

## Remote Front / Side View




## Fully Ducted - Front / Side View

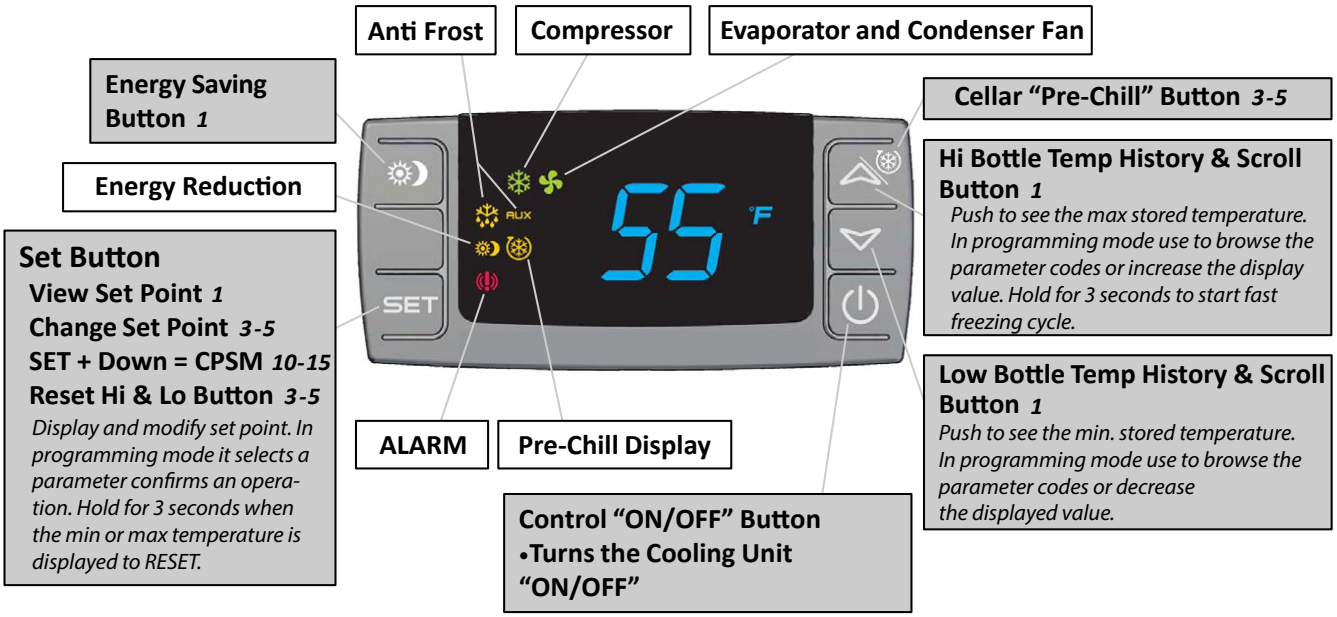


# QUICK REFERENCE GUIDE
# Standard Controller Layout

***If your unit is installed through the wall and does not have a remote keypad you have the Standard Controller***

**Note:** The 1 or 3-5 qualifies the amount of time in seconds that the button must be pushed to activate the feature.

**Refer to page 27 for complete listing of buttons and symbols.**

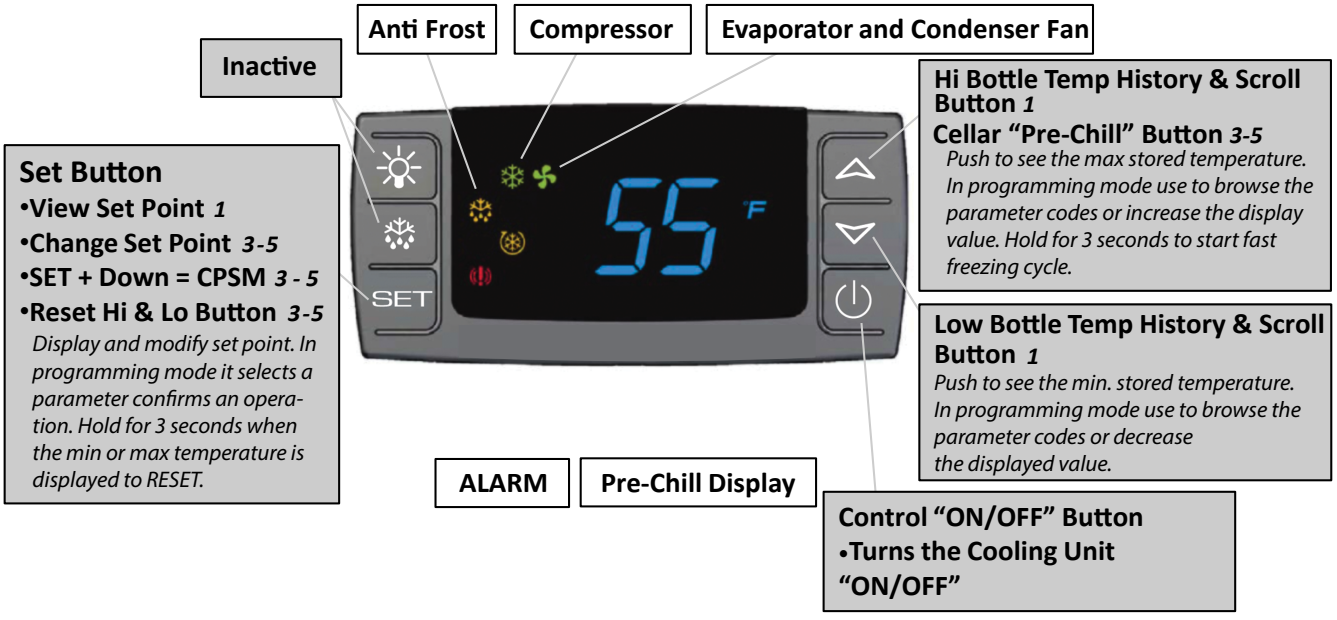

Anti Frost
Compressor
Evaporator and Condenser Fan
Energy Saving Button 1
Energy Reduction
Set Button
View Set Point 1
Change Set Point 3-5
SET + Down = CPSM 10-15
Reset Hi & Lo Button 3-5
Display and modify set point. In programming mode it selects a parameter confirms an operation. Hold for 3 seconds when the min or max temperature is displayed to RESET.
Cellar "Pre-Chill" Button 3-5
Hi Bottle Temp History & Scroll Button 1
Push to see the max stored temperature. In programming mode use to browse the parameter codes or increase the display value. Hold for 3 seconds to start fast freezing cycle.
Low Bottle Temp History & Scroll Button 1
Push to see the min. stored temperature. In programming mode use to browse the parameter codes or decrease the displayed value.
ALARM
Pre-Chill Display
Control "ON/OFF" Button
•Turns the Cooling Unit "ON/OFF"
SET
AUX
55
°F

# Remote Controller Layout

***If your unit has a remote keypad then you have the Remote Controller***

**Note:** The 1 or 3-5 qualifies the amount of time in seconds that the button must be pushed to activate the feature.

**Refer to page 31 for complete listing of buttons and symbols.**


Anti Frost
Compressor
Evaporator and Condenser Fan
Inactive
Set Button
•View Set Point 1
•Change Set Point 3-5
•SET + Down = CPSM 3 - 5
•Reset Hi & Lo Button 3-5
Display and modify set point. In programming mode it selects a parameter confirms an operation. Hold for 3 seconds when the min or max temperature is displayed to RESET.
Hi Bottle Temp History & Scroll Button 1
Cellar "Pre-Chill" Button 3-5
Push to see the max stored temperature. In programming mode use to browse the parameter codes or increase the display value. Hold for 3 seconds to start fast freezing cycle.
Low Bottle Temp History & Scroll Button 1
Push to see the min. stored temperature. In programming mode use to browse the parameter codes or decrease the displayed value.
ALARM
Pre-Chill Display
Control "ON/OFF" Button
•Turns the Cooling Unit "ON/OFF"
SET
55
°F

# FAN SPEED REFERENCE

Your fan speed selection will depend on the amount of heat that needs to be removed from the cellar and the application of the unit (through a wall or fully ducted). Fan speed selection will depend on the cellar size, insulation factor, door seal and desired wine temperature. When initially installing the unit, set the fan speed to **High** setting for a quick chill down. Once the temperature of the cellar reaches the desired temperature, you may be able to select a lower fan speed to handle the normal load. In the event the temperature outside goes above 90 degrees, (when exhausting to the outside) you may need to select the higher fan speed.

**Fully ducted units need to be set and stay in the High fan speed position.**

| Model | 3500ti & 3500tiR | | | 5000ti & 5000tiR | | | 8000ti & 8000tiR | | |
|---|---|---|---|---|---|---|---|---|---|
| **Speed Selection** | **Low** | **Med** | **High** | **Low** | **Med** | **High** | **Low** | **Med** | **High** |
| **Air Flow** (CFM) | 147 | 180 | 256 | 147 | 180 | 256 | 274 | 318 | 333 |
| **Sound** (dBA In Cellar / Out of Cellar) | 51/51 | 58/57 | 66/65 | 51/51 | 58/57 | 66/65 | 57/57 | 59/59 | 60/61 |
| **Cooling Capacity** (BTU/h) | 2374 | 2514 | 2688 | 3709 | 3928 | 4200 | 5140 | 5606 | 5760 |

* To get a feeling for decibels, a food blender at 3ft is 90 dBA, garbage disposal at 3ft is 85 dBA, vacuum cleaner at 10ft is 75 dBA, normal speech at 3ft is 79 dBA, dishwasher in the next room is 55dBA, Quiet night is 35dBA

# UNIT SPECIFICATIONS

| Model | 3500ti & 3500tiR | 5000ti & 5000tiR | 8000ti & 8000tiR |
|---|---|---|---|
| Cellar Size | 800 cu. ft. | 1250 cu. ft. | 2000 cu.ft |
| Dimensions | 14.25"W x 15.75"H x 28"D | 14.25"W x 15.75"H x 28"D | 14.25"W x 22"H x 28"D |
| Weight | 115 lbs | 115 lbs | 150 lbs |
| AMPS (running) | 9 | 9 | 10 |
| dBA | 51 low 58 med 66 high | 51 low 58 med 66 high | 57 low 59 med 61 high |
| Installation | Through-the-Wall, Partially Ducted, Fully Ducted | | |
| Thermostat | Digital Control Display | | |
| Temp. Delta | 55°F temperature differential (maintains proper cellar temperature when exhaust environment does not exceed 110°F) | | |
| Outside Venting | Can be done if the outside temperature does not exceed 110°F, the external grille cover is required. | | |
| Ducting Options | Unit can be fully ducted. | | |
| Warranty | 2 year parts and labor / 5 year compressor | | |

# INTRODUCTION

### Customer Service
Thank you for purchasing a WhisperKOOL Extreme Series cooling unit. We strive to provide the highest quality products and the best possible customer service. If you have any questions about your WhisperKOOL unit, please call us at 1-800-343-9463 or visit whisperkool.com.

### Using the Manual
This User's Manual is intended to assist in the proper installation and maintenance of the WhisperKOOL cooling unit. In order to ensure the longevity of your cooling unit, the equipment should be installed properly and have a proper care and maintenance schedule. Please read and review this manual carefully and keep it for future reference.

### What Is the WhisperKOOL Cooling Unit?
The WhisperKOOL unit is a specialized refrigeration unit designed for one purpose only: to maintain the optimal temperature and humidity levels conducive to the proper storage and aging of fine wines. It is a self-contained cooling unit designed to be used as a forced-air through-the-wall unit or as a remote mount unit with external ductwork connections.

### How Does the WhisperKOOL Extreme Series Work?
The WhisperKOOL unit is especially designed for the use and application to maintain optimal conditions for wine storage and aging. The unit is fully self-contained and can be installed as a "Through-The-Wall' application, or the unit is capable of an even more flexible "Ducted" application, which allows the unit to be placed in an indoor remote site, resulting in a quiet airflow. The standard "Through-the-Wall" and ducted units are temperature controlled via a bottle probe, and the ducted unit comes standard with a remote key board that can be located up to 50 ft from the cooling unit (Note: Remote Unit comes standard with a 50 ft bottle probe and 50 ft. of cable for the remote keypad, additional lengths are optional).

### Temperature Setting
The WhisperKOOL Extreme unit can be set at any temperature within the acceptable wine-aging range of 50°F to 67°F. It is designed to cool up to 55°F cooler than the ambient temperature of the space to which it is exhausting.

# RECEIVING & INSPECTING THE UNIT

## Receiving and Inspecting the Unit

- Lift only at the designated hand hold locations on the shipping container or fully support the unit from underneath. A shipment may include one or more boxes containing accessories.
- Before opening the container, inspect the packaging for any obvious signs of damage or mishandling.
- Write any discrepancy or visual damage on the Bill of Lading before signing.
- Place the box containing the WhisperKOOL unit on a tabletop to prepare it for testing prior to installing.
- Sit upright for 24 hours.

**Note:** WhisperKOOL Extreme units are manufactured in the USA and tested prior to shipment.

## Review the Packing Slip to Verify Contents

- Check the model number to ensure it is correct.
- Check that all factory options ordered are listed.

**If any items listed on the packing slip do not match your order information, contact WhisperKOOL Customer Service immediately.**

## Check the Box for the following contents:

**Extreme Cooling Unit**

Single Piece Mounting Bracket

Accessory Kit One:

- WhisperKOOL Extreme Series Owner's Manual

Accessory Kit Two:

- 8' Power Cord
- Mounting Bracket Insulation Foam Short (2)
- Mounting Bracket Insulation Foam Long (2)
- Bottle Temperature Probe (Standard Unit)

Accessory Kit Three:

- 1 ¾ Standard Screws (9)
- ½ Self-Tapping Screws (5)
- ½ x ½ Barbx MNPT Fitting
- Drain Line tube (1)
- Connection "T" (1)

Please leave the WhisperKOOL unit in its original box until you are ready for installation. This will allow you to move the product safely without damaging it. When you are ready to remove the product from the box, refer to the installation instructions.

**TIP:** Save your box and all packaging materials. They provide the only safe means of transporting/shipping the unit.

# QUICK START GUIDE

This guide is meant to serve as a quick reference for installation of the WhisperKOOL unit. The remainder of this Owner's Manual will provide more detailed information and instructions.

Upon receiving the WhisperKOOL unit:

1. **Inspect the unit before installation.** If damage is found, please contact your distributor or WhisperKOOL Customer Service at 1-800-343-9463 ext 799.
2. The unit should **remain in an upright position for 24 hours** prior to operation.
3. The WhisperKOOL unit **requires a dedicated 115 volt 20 amp circuit**. Use a surge protector with the WhisperKOOL unit. **Do not use a GFI** (Ground Fault Interrupter) line.
4. For your convenience, the WhisperKOOL unit has two power inlets, one on the side of the unit and the other on the back. Use the selector switch, located on the right side of the unit, to select the inlet you would like to use.
5. The unit is designed to gently cool down the temperature of the cellar over time by cycling cooler and cooler air throughout. **Test the unit prior to installation.** Operate unit for twenty minutes. While the unit is running and working properly, **the air discharged from the front should be 10 - 15°F cooler than the air** in the room. This means that in an environment where the air is 80°F, the unit will discharge air that is 65-70°F.
6. It is **REQUIRED** to **install a drain line** to remove condensation from the unit.
7. The WhisperKOOL unit is intended **for use in properly designed and constructed wine cellars.** Hire a professional wine storage consultant with a valid contractor's license to build your wine cellar. Refer to the "How to Build a Wine Cellar" video available on the WhisperKOOL website at www.whisperkool.com.
8. Install the foam strips along the inside edge of the unit's flange to assure a proper seal against the wall.

**Never try to open the WhisperKOOL unit, repair it yourself, or use a service company without WhisperKOOL's authorization. This will void your warranty.**

If you encounter a problem with your WhisperKOOL unit, please refer to the Troubleshooting Guide. If you have any further questions, concerns, or need assistance, please contact WhisperKOOL Customer Service at 1-800-343-9463 ext. 799. Please be sure all testing has been completed prior to contacting Customer Service. Please have your results ready for your representative.

# PREPARING THE WINE CELLAR

The performance and life of your WhisperKOOL unit is contingent upon the steps you take in preparing the wine cellar.

**Note:** Improperly preparing your enclosure or incorrectly installing your WhisperKOOL unit may cause unit failure, leaking of condensation, and other negative side effects.

## IT IS HIGHLY RECOMMENDED THAT YOU OBTAIN THE ASSISTANCE OF A WINE STORAGE PROFESSIONAL.

Wine storage professionals work with licensed contractors, refrigeration technicians, and racking companies to build well-insulated, beautiful, and protective wine cellars. WhisperKOOL has put together some useful tips to assist in the installation process. Our recommendations are meant to act as a guide in the process of building a proper enclosure. Your intended location may have specific needs that we do not address.

### How to Build a Wine Cellar Instructional Video

WhisperKOOL has a construction tutorial available on line at our website: www.whisperkool.com. This tutorial will walk you through the steps of constructing a properly built wine cellar and the installation of our WhisperKOOL product line.

### Wall & Ceiling Framing

Build wine cellar walls using standard 2x4 or 2x6 construction methods and ceiling joists following the guidelines of local and state codes in your area. As a general rule, the thicker the walls and the higher the insulation value in your cellar, the better it will be at maintaining a consistent temperature.

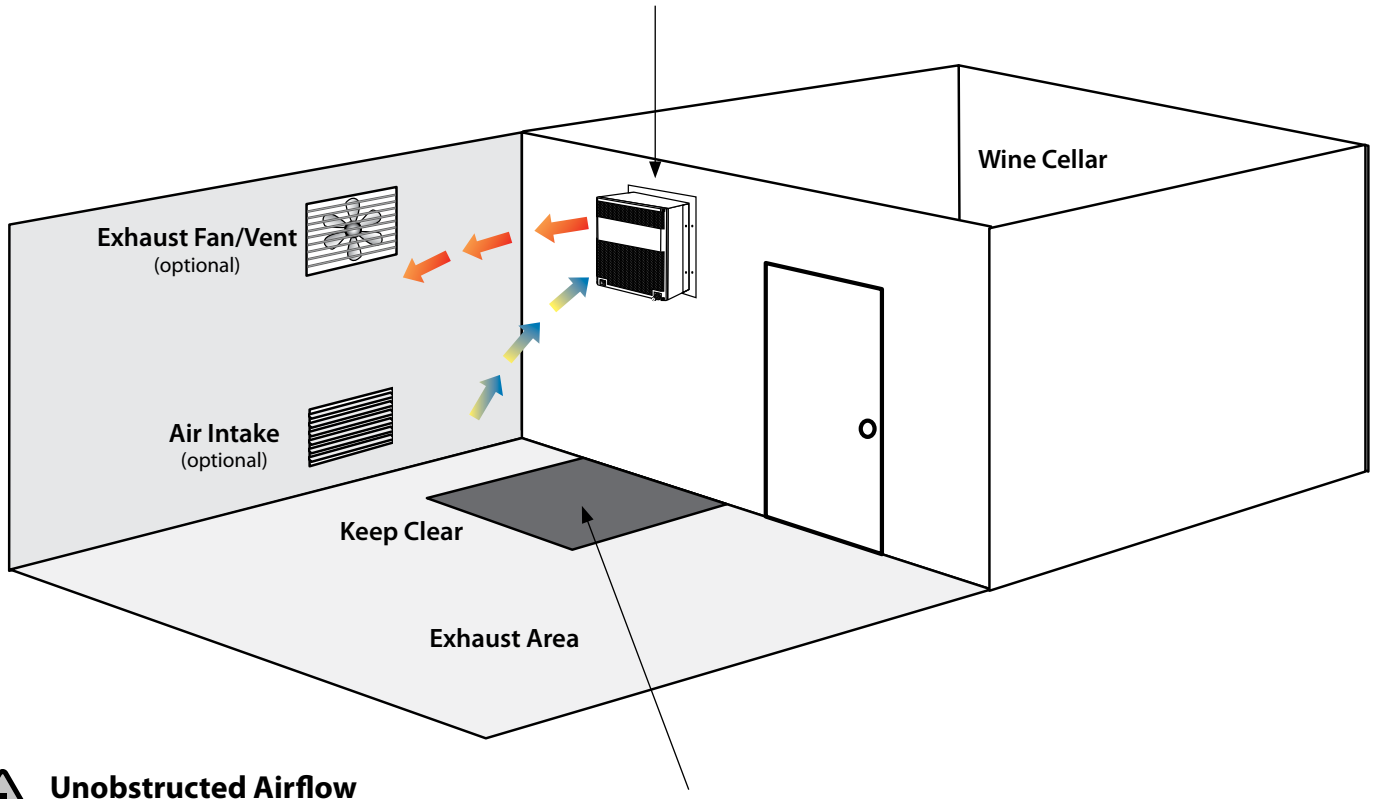
### Insulation

Insulation is **REQUIRED** with the use of the WhisperKOOL product. Standard fiberglass or rigid foam insulation is normally used in cellar construction or, in some cases, "blown-in" insulation is used. It is very important that all walls and ceilings are insulated to keep the cellar temperature as consistent as possible during the summer and winter months. The R-value, or quality of insulation, is determined by the rate at which heat passes through the insulation. The higher the R-value, the more resistant the insulation is to conducting heat. Using higher R-values in insulation will lower your operating costs and unit run time. (R-13 minimum, R-19 recommended, R-30 for ceiling and exterior walls.)

### Vapor Barrier

A vapor barrier is **REQUIRED** to prevent the intrusion of water vapor so that the cellar can be kept at the correct temperature and humidity. 6 mm plastic sheeting (recommended) should be applied to the warm side of the cellar walls. The vapor barrier must also be applied to the outside walls and ceiling. If it is impossible to reach the outside, then the plastic must be applied from within the cellar. The most common method is to wrap the entire interior, leaving the plastic loose in the stud cavity so the insulation can be placed between each stud. All of the walls and ceiling must be wrapped in plastic for a complete vapor barrier.

In areas of high humidity, such as Southern and Gulf States, the vapor barrier will prevent infiltration of warm moist air. The moist air can cause mold to form, and standing water in drain pans promote microbial and fungal growth that cause unpleasant odors and indoor air quality problems. If mold is found, remove it immediately and sanitize that portion of the unit.



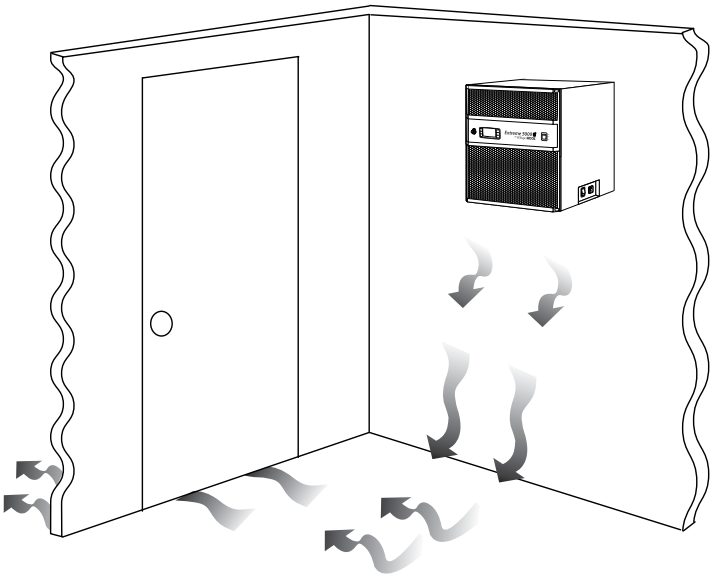

## Unobstructed Airflow

Unobstructed airflow to and from the unit is critical for the unit's overall performance and life-span. A minimum three-foot clearance (five foot is ideal) area is crucial. The air the fans blow needs to circulate and either dissipate or absorb heat from the space, the more air to exchange the more efficient the unit will operate.

**Note:** Avoid attempting to camouflage the unit. This will restrict airflow and thus the unit's ability to work efficiently.

## Door and Door Seal

An exterior grade (1 3/4") door must be installed as a cellar door. It is very important that weather stripping is attached to all 4 sides of the doorjamb. A bottom "sweep" or threshold is also required. The door must have a very good seal to keep the cool cellar air from escaping out of the cellar. One of the most common problems with cooling units running continually is due to the door not sealing properly. **In cases where glass doors are used and the room size is close to the recommended unit size, the next larger size WhisperKOOL should be used.** This will compensate for the insulation loss due to the lower insulating rating of glass.

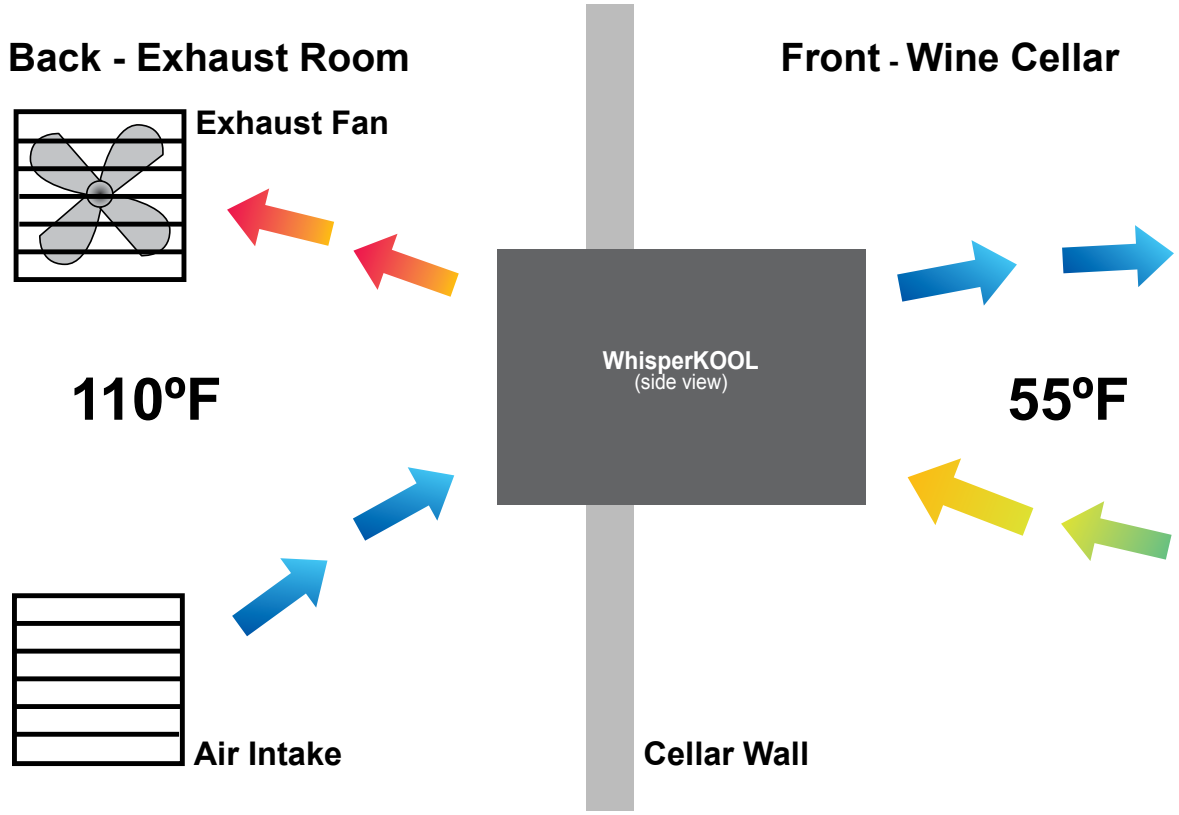


## Ventilation

The necessity of dissipating heat away from the unit is critical to the unit's performance and cannot be overstated. As the unit operates and cools, a greater amount of heat is generated on the exhaust side of the unit. Adequate ventilation is required in order to dissipate heat away from the unit. If ventilation is inadequate, the exhaust will heat up the area or room and adversely affect the unit's ability to cool. In some cases, it may be advisable to install a vent fan to dissipate heat within the exhaust area on the backside of the unit. However, you must have a fresh air inlet as well. If your unit requires ducting, please contact WhisperKOOL to obtain a specially designed ducting plenums for the unit.

**Using any other ducting system will void the warranty.**

**Note:** If you are unsure about having adequate ventilation in your install location, please contact us to assess your specific installation at support@whisperkool.com or 1-800-343-9463.




## Ambient Temperature Factor

The cooling unit has the ability to cool a wine cellar efficiently to 55°F as long as the ambient temperature of the area that it is exhausting to does not exceed 110°F. Therefore, you want to exhaust the unit in a room which will not exceed 110°F. Otherwise the unit will not have the capacity to keep the wine at a desirable 55°F.

**Warning, allowing your unit to operate in high ambient temperatures for extended periods of time will greatly decrease the life of your unit and void your warranty.**

# PRE-INSTALLATION

## TEST THE UNIT PRIOR TO INSTALLATION

To prepare it for testing before installation in wall:

- Unit needs to be in the upright position for 24 hours before starting.
- Remove unit from box
- Place unit on tabletop
- Plug in unit to electrical outlet
- Plug in bottle probe
- Turn on to test (Should be 10°F- 15°F across coils) approximately 20-30 minutes
- Turn off after test
- Remove bottle sensor

### Electrical Needs

**The WhisperKOOL Extreme Unit requires a dedicated 115 volt 20 amp circuit**. The unit draws a large amount of amps at initial start up. By designating a dedicated circuit breaker, you will guarantee the unit has enough power to run effectively. Contact an electrician for assistance with the installation of this dedicated electrical circuit:

- Match the electrical outlet to the plug provided on the WhisperKOOL unit.
- Provide a dedicated circuit and wiring for the unit.
- Provide a weatherproof plug for units connected outside.

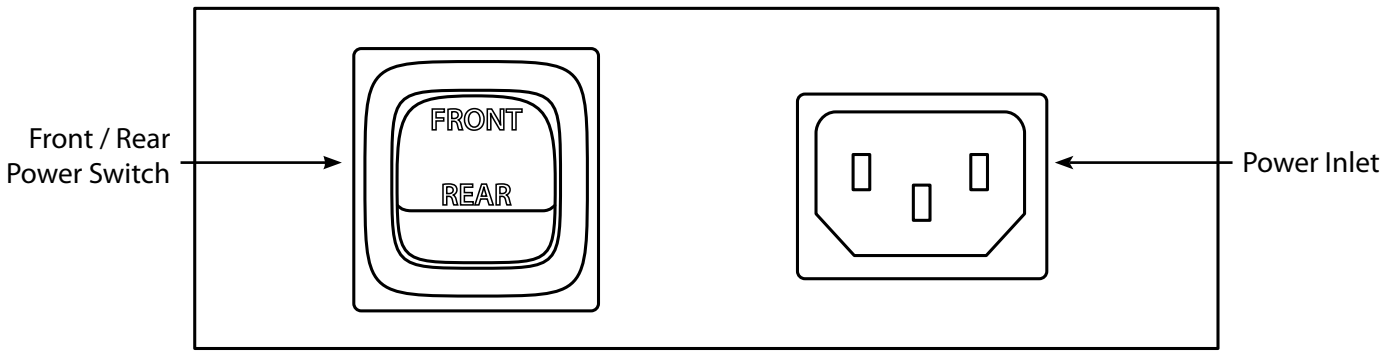
Plug your WhisperKOOL unit into a surge protector or power conditioner. As with any sensitive electrical equipment, the WhisperKOOL electrical equipment may be damaged by power surges and spikes. Power surges and spikes are not covered under warranty.

**WE RECOMMEND THAT YOU DO NOT USE A GROUND FAULT INTERRUPTER (GFI) WITH THIS PRODUCT.**

### Electrical Inlets

The unit is equipped with two power inlets: One is located on the right side of the unit; (inside the cellar) the other is located on the rear of the unit (outside of the cellar). Use the selector switch located on the right side of the unit to select which power inlet you would like to utilize. (Meaning if you would like to plug the unit into a socket outside of the cellar, set the selector switch to rear; if you would like to plug the unit into a socket inside of the cellar, set the selector switch to the front position. When placed in either position power can only enter the unit utilizing the power inlet you've selected.)

In case the unit should lose power, check the home/main circuit breaker. If the unit does not respond properly, refer to the Troubleshooting section.

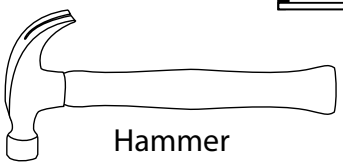


# PREPARING THE INSTALLATION LOCATION

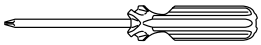
## Through-the-Wall

**Minimum Tools Needed**

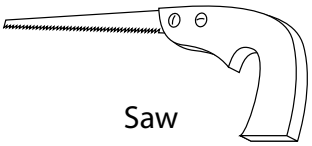
Level



Hammer

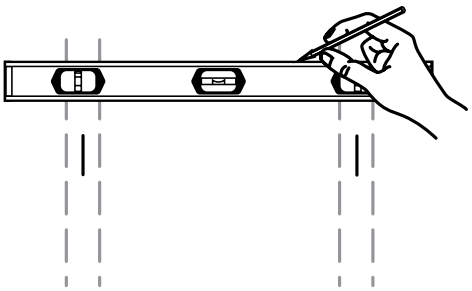


Screwdriver



Saw

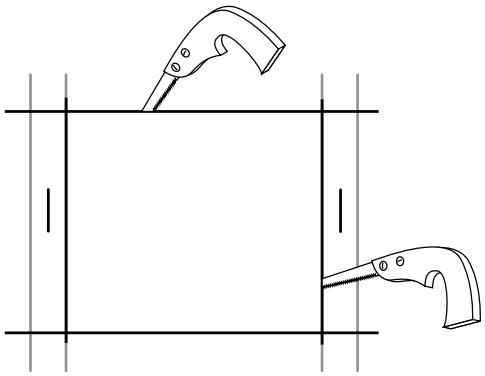
Locate the desired installation location (no lower than 18" inches from the ceiling). Using a stud finder, locate the studs on either side of the center point, and mark them with vertical lines.



Using a level and a pencil, mark a horizontal line on the wall between the two studs, no less than 1 1/2" and no more than 18" from the ceiling.

Using a ruler or measuring tape, measure 16" down (3500ti/tiR & 5000ti/tiR) or 22.25" down (8000 ti/tiR), and mark another horizontal line parallel to the first one.

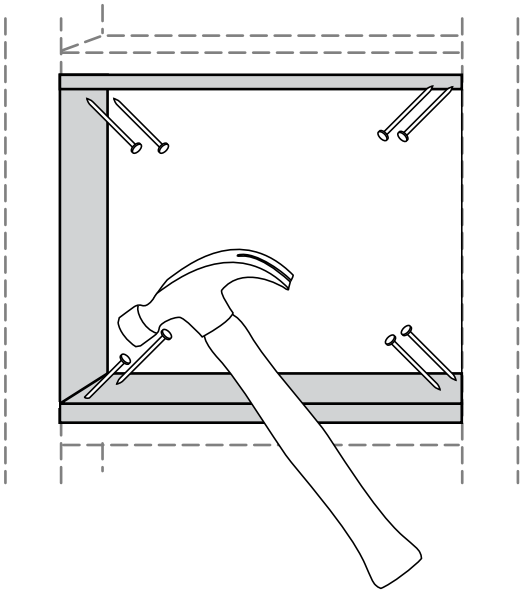
Using a saw, cut along the uppermost horizontal line until your saw reaches the stud. Turn the saw around, inserting it into the cut you have just made, and cut toward the opposite stud so that you have a clean horizontal cut between the two studs. Be careful not to cut into the studs themselves.



Now make the second horizontal cut from stud to stud on the line 16" below the first cut.

Once the horizontal lines have been cut, make vertical cuts using the inside edge of the studs as a guide. Once you have made both vertical cuts, you should have a rectangular hole in the sheetrock. Now you have to make the same hole on the other side of the wall. Since you already have one hole, this is an easy process. Using a nail, mark all four corners of the first hole by making nail holes through the sheetrock. Then on the other side of the wall, connect the holes with a pencil mark and cut.

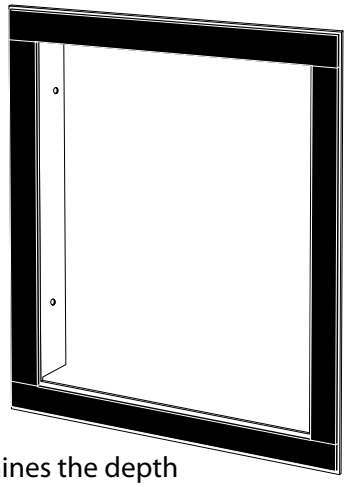
Sheetrock alone cannot support the weight of a 96-pound cooling unit. Therefore, it is necessary to frame the hole that you have just cut with upper and lower supports. These supports also provide solid material for the mounting bracket screws.



Using two 2x4s at 14.5" in length and eight 6d nails, secure the upper and lower supports to the right and left studs, just inside the sheetrock. Make sure that the internal height remains at 16" (3500ti/tiR & 5000ti/tiR) or 22.25" (8000 ti/tiR) so that the WhisperKOOL unit will fit snugly through the framed cut-out.

**REFER TO THE ACTIVE HUMIDITY INSTALLATION GUIDE FOR INSTRUCTIONS ON HOW TO INSTALL THE WATER LINE AND HUMIDISTAT.**

# PREPARING THE UNIT FOR INSTALLATION

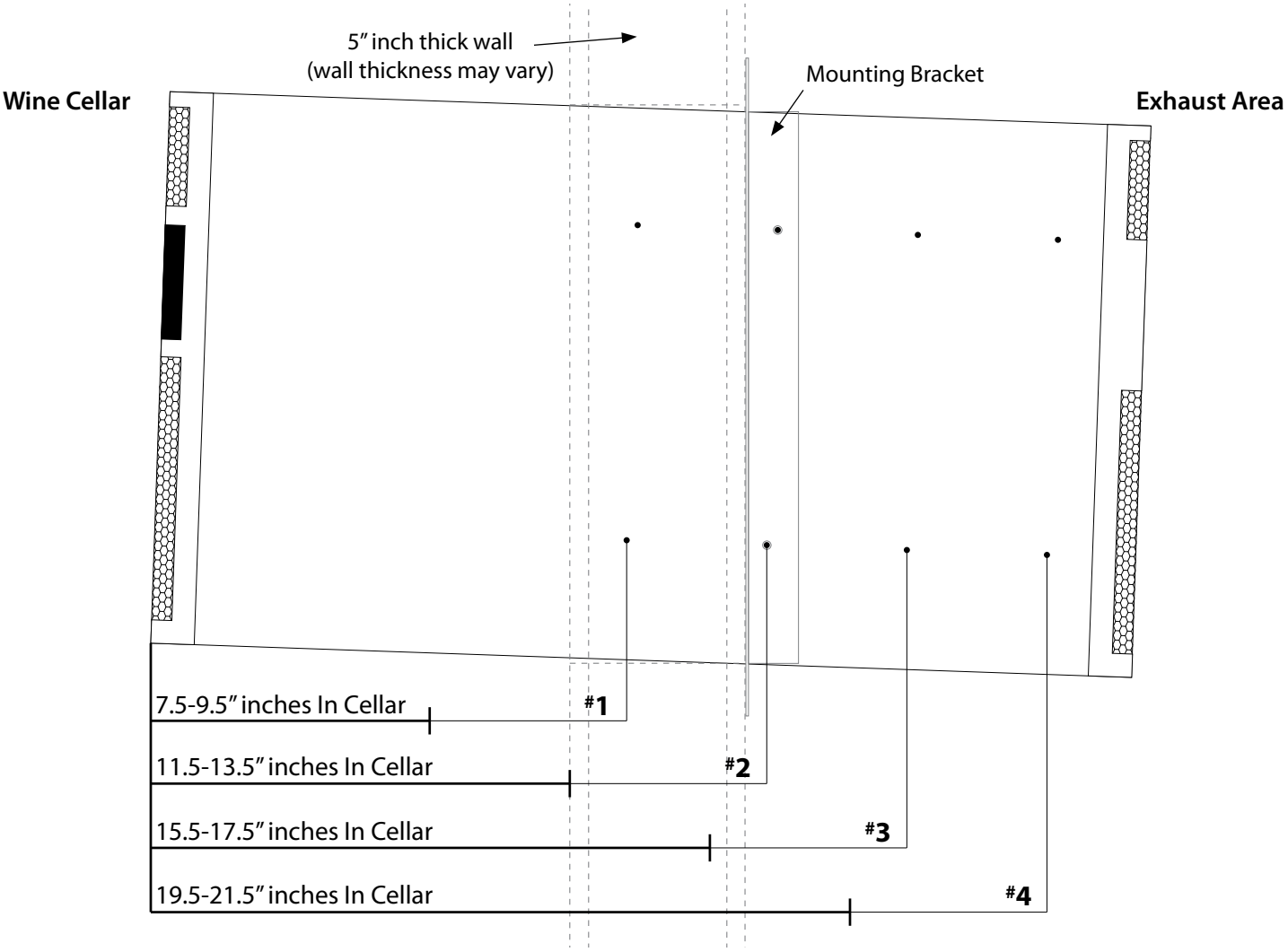


### Single Piece Mounting Bracket
This sturdy bracket is used to frame the installation location and secures the unit to the wall studs. The bracket has been designed to hold the unit at a 2º degree angle, this helps project the air into the space and aids in condensation drainage.

### Applying Insulation Tape
Locate the (4) precut pieces of black foam tape included with the unit, two larger pieces and two smaller pieces. To apply, simply peel back the white-paper adhesive covering and place on the mounting bracket. The large pieces are applied to the top and bottom while the smaller pieces are for the sides. This foam creates a tight seal between the bracket and the wall.

### Mounting Bracket Installation
Select your desired bracket mounting location (see diagram below), this location determines the depth of the installation. For example, position #1 keeps most of the unit out of the cellar while position #4 makes the back of the unit near flush on the exterior wall. Slide bracket onto unit, pay special attention to the TOP label on the bracket and the flanges for mounting to the unit are towards the back. Use the (4) supplied 1/2" self tapping screws to fasten the bracket to the unit. It is imperative to not use self tapping screws longer than 1/2" in length.

**If you are installing through an exterior wall, please review the next page for specific instructions on exterior grill installation.**



# OPTIONAL EXTERIOR GRILLE

### Exterior Grille Installation

The exterior grille is required on all installations where the exhaust side of the unit is exposed to the outside of the dwelling (i.e. rain and weather).

### Non-Flush Installation

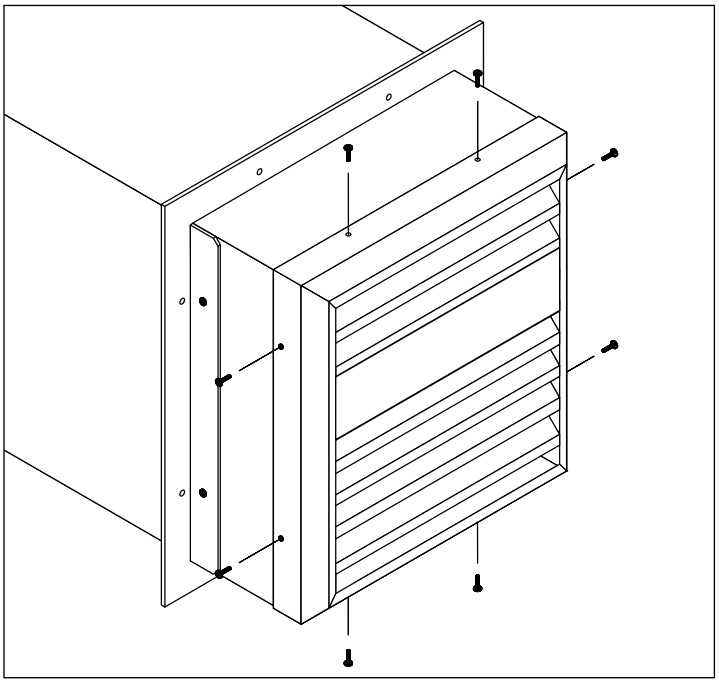
Install the unit according to the standard through-the-wall procedure. After the unit is installed, place the exterior grille over the exhaust side filer grille and line up the screw holes on the top, bottom, and sides. Use the supplied (8) self tapping screws to fasten the grille to the unit.

### Flush Installation

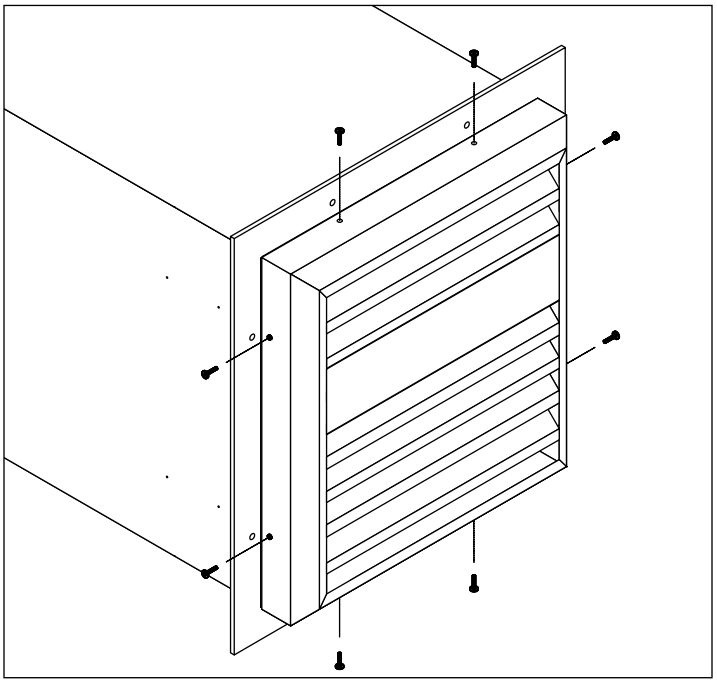
This installation is slightly different because you are utilizing the same holes for both the mounting bracket and exterior grille.

1. Slide the mounting bracket onto the unit followed by the exterior grille, bring the two pieces together by sliding the exterior grille over the mounting bracket side flanges.
2. Align the (2) top screw holes of the exterior grill with the top screw locations on the unit, use the supplied self tapping screws to fasten the grille.
3. Repeat step 2 on the bottom of the unit.
4. You will notice the side holes do not line up, use the supplied self tapping screws to fasten the grille and bracket to the unit ensuring the bracket stays perpendicular/square.
5. Continue through-the-wall installation.

**It is required to use the 1/2" self tapping screws provided. Do not drill screws into unit.**



Non-Flush Installation



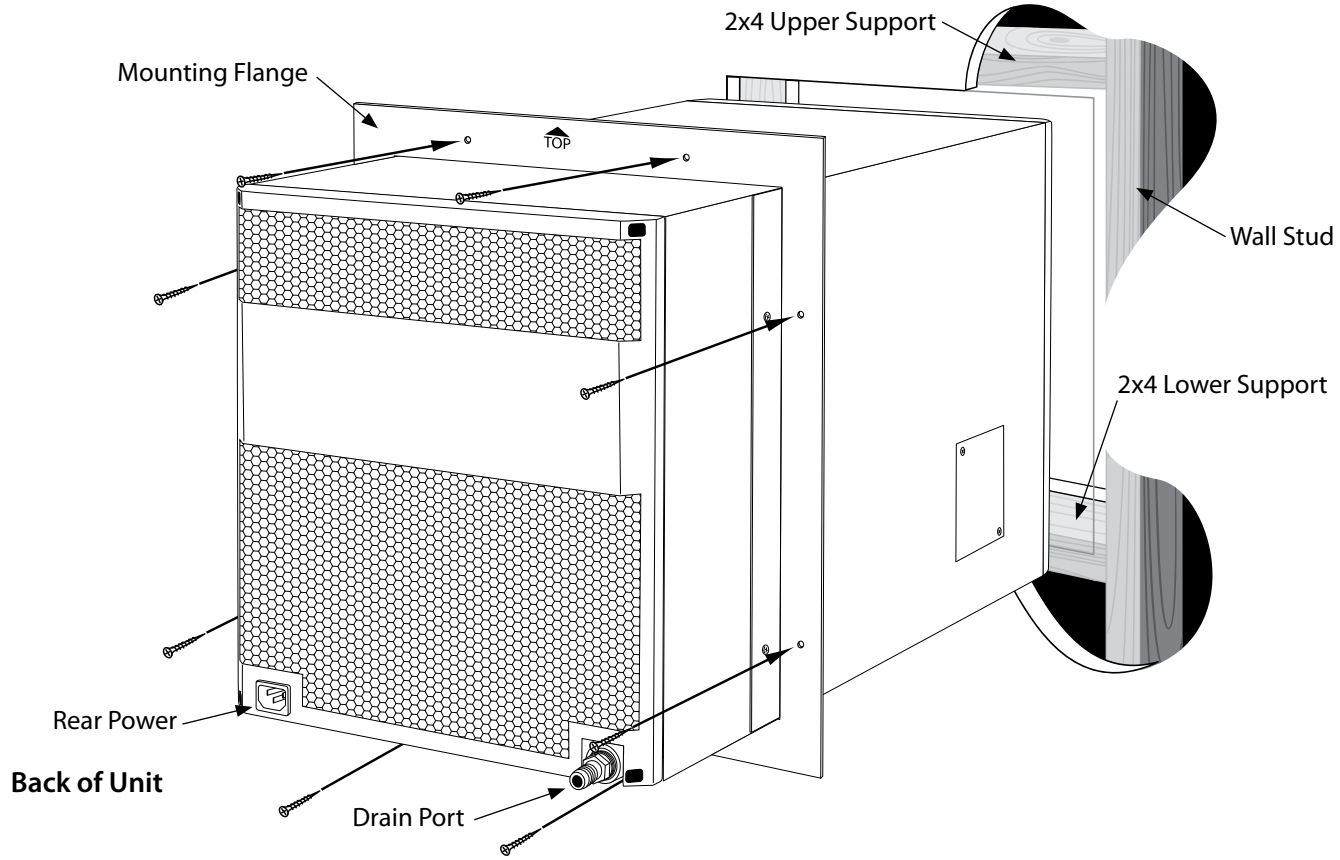
Flush Installation

# THROUGH-THE-WALL INSTALLATION

**Installing the Unit**

Slide the unit from the outside wall into your wine cellar with the outer flange flush to the wall. Secure the flange to the wall through the pre-drilled holes. The screws should penetrate the studs as well as the upper and lower supports to provide adequate support for the WhisperKOOL unit (see illustration). Seal all cracks and gaps around the WhisperKOOL Extreme unit with an air-tight sealant or caulking to prevent air leakage.

**Note:** If you use decorative moulding, it should be attached to the walls and never to the cooling unit itself. The moulding itself should be removable incase the unit needs servicing



# NOTES

# ACTIVE HUMIDITY OPTION OVERVIEW

## ACTIVE HUMIDITY SPECIFICATIONS

| | |
|---|---|
| Power Consumption | 0.2 amps @ 120V/60 Hz |
| dBA | TBD |
| Humidistat Range | 30-90% RH |
| Humidistat Accuracy | ± 1% |
| Humidistat Adjustment Increments | 1% |
| Water Supply Feed Rate | 0.63 gph @ 40 psi |

**Accessory Included with Active Humidity Option:**
(1) 25 ft. Humidistat Cable
(1) Dayton Humidistat

### Use of the Active Humidity Option

Humidity may fluctuate in the wine cellar. The Active Humidity Option stabilizes the environment by adding moisture when the wine cellar is becoming dry. Using a humidistat and a water source, the Active Humidity Option is able to regulate and establish a humid environment suitable for wine storage.

**Note:** The ideal humidity of a wine cellar is between 50-70%.

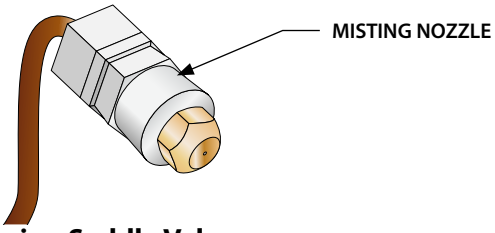
### General Active Humidity Option Recommendations

- Water source needs to have at least 40 psi.
- Water tubbing size: 1/4" O.D
- Water source should be tested for content and characteristics.
- In areas that are known to have hard water, the use of a Water-Softener System is required.

**Note: Failure to install a Water-Softener or a Filtration system will allow an excessive particle residue buildup and may lead to system failure.**

- Even if the area is not known to have hard water, the use of a Filtration System (Particle Filter) is required.
- Clean the evaporator coil every 3 months to remove particle residue buildup.
- It might be best to use a Self-Piercing Saddle Valve as a simple connection to a water source.
- Clean or replace the Misting Nozzle every 12 months.

**Do not** allow water leakage inside of the Unit.




### Self-Piercing Saddle Valve

Install a Self-Piercing Saddle Valve to a near by water supply for simple connection to a water source as shown in **Figure 1**.

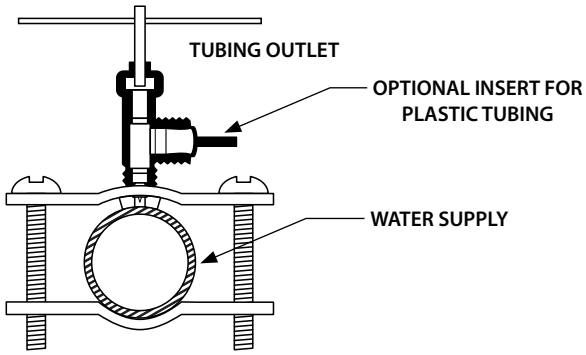



**Figure 1**

### Water Flow Order

- The water supply should pass through either a Water-Softener or a Filtration system before reaching the unit as shown in **Figure 2**.
- Route a 1/4" Copper, Pex or equivalent tubing from the water source and connect to the water inlet fitting on the unit as shown in **Figure 3**.
- Turn on the water and check for leaks.

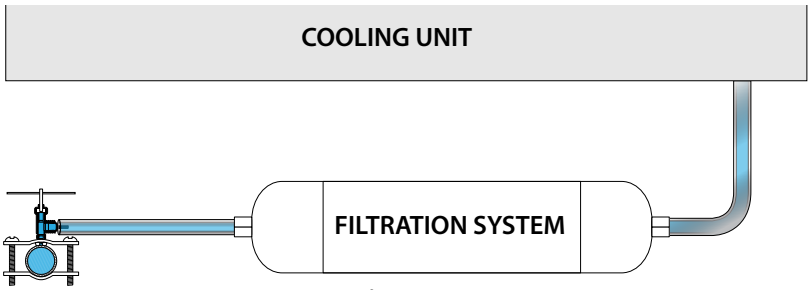



**Figure 2**

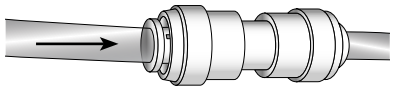


**Figure 3**

# HUMIDISTAT INSTALLATION

**Note: Only a 120v Humidistat can be used with this unit.**

### Routing the Wiring

1. Plug the circular connector from the humidistat cable into the circular connector on the unit as shown in Figure 1.
2. Route the wire from the unit to the desired humidistat location.

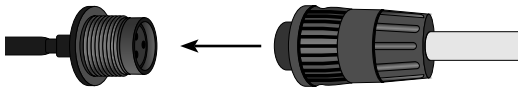


**Figure 1**

### Removing the Cover

1. Move both slide controls to the bottom position.
2. Use a screwdriver to loosen the screws at the bottom of the humidistat as shown in **Figure 2**.

**Note:** Slide controls to the bottom position

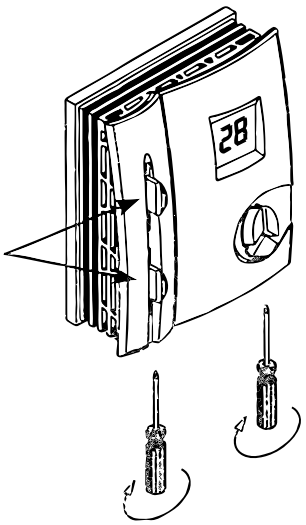



**Figure 2**

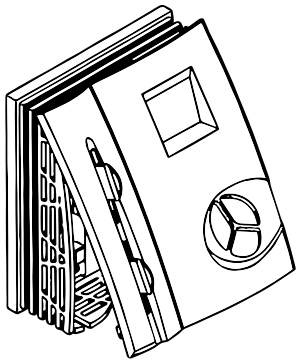


**Figure 3**

3. Carefully remove the cover as shown in figure **Figure 3**.

### Mounting Without a Wall Mount Plate

1. Make sure the humidistat electrical is unplugged before installing the unit.
2. Position the back half of the humidistat cabinet on the wall or junction box and ensure it is level and covers the junction box completely.
3. Pull the electrical wires through the hole at the terminal block of the humidistat.
4. Drill holes in the wall through the 2 mounting holes in the back of the humidistat cabinet as shown in **Figure 4** and insert anchors into the holes.
5. Fasten the humidistat to the wall with screws through the mounting holes.

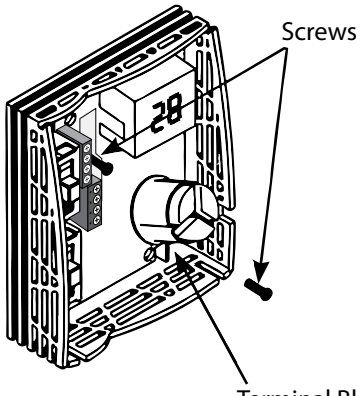



**Figure 4**

# HUMIDISTAT INSTALLATION

### Mounting With a Wall Mount Plate

1. Make sure the humidistat is unplugged before installing the unit.
2. Position the wall mount plate on the wall or junction box and ensure the plate is level and covers the junction box completely.
3. Pull the electrical wires through the hole in the wall mount plate.
4. Drill holes in the wall through the 2 mounting holes in the back of the wall plate as shown in **Figure 5** and insert anchors into the holes.
5. Pull the electrical wires through the hole at the terminal block.
6. Fasten the wall plate with 2 screws through the mounting holes.
7. Then fasten the humidistat to the wall plate with screws through the mounting holes.

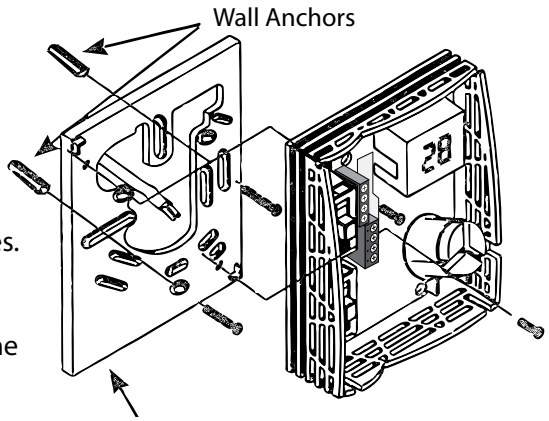



**Figure 5**

### Electrical Connection

1. Connect the electrical wires to the corresponding terminals on the terminal block following the circuit diagram inside the top cover of the unit. **See Figure 6**
2. Connect the white wire to the N terminal, the red wire to the 1 terminal, and the black wire to the L terminal on the humidistat.

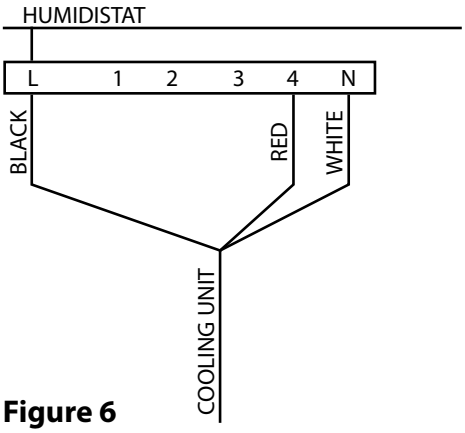



**Figure 6**

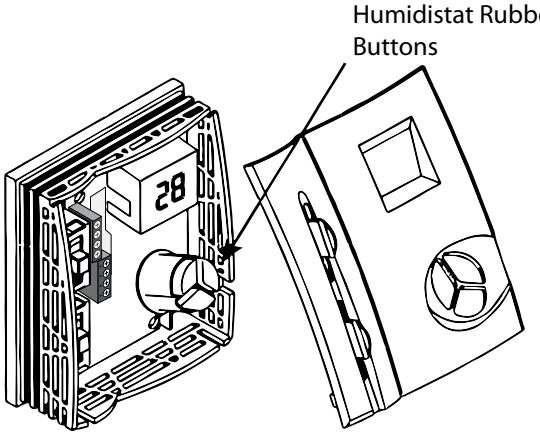



**Figure 7 – Make sure the rubber buttons align with the holes in the cover.**

### Reattaching the Cover

1. Move both slide controls to the bottom position.
2. Align the humidistat rubber buttons with the holes in the cover as shown in **Figure 7**.

**NOTE: If the controls are not lined up when the faceplate is being reattached, then the controls may become stuck. In order to reattach the faceplate correctly move the slide controls to the bottom position to line up them up.**

3. Carefully attach the top cover. Ensure the cover locks in place by pushing down on the top of the faceplate and then pushing inward toward the wall.
4. Attach the screws at the bottom of the cover and tighten into place as shown in **Figure 8**.

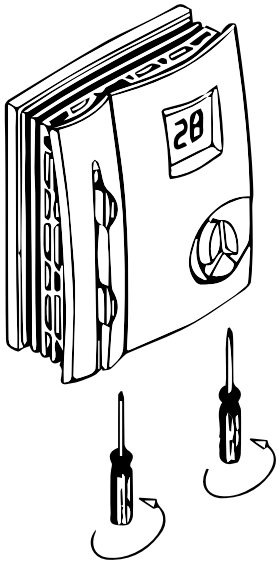


**Figure 8**

### Correct Humidistat Settings

1. Use the "UP" or "DOWN" arrow to reach the desired humidity level on the display and press "ENTER".
2. Set the top selector switch to the "HUMID" setting.
3. Set the bottom selector switch to the "OFF" setting.

# DUCTING OVERVIEW

### Use of Ductwork

Use ductwork to connect the unit to the supply and return outlets in the wine cellar. Use only insulated ductwork to minimize cooling losses, prevent sweating and reduce noise. Use ductwork on the condenser section to redirect or absorb sound, bring in outside air to the unit inlet, and/or exhaust the hot air.

**Note:** Do not exceed a total of 25' for each length of ductwork run and a total of 50' combined for both the supply and return lengths.

Avoid crimping the flexible ducts. This chokes down the inside area and reduces the airflow causing the unit to operate improperly. Be sure all duct work and outer surfaces in contact with the airflow are insulated and have a vapor barrier on the outside. Un-insulated supply and return ducts may cause bare, exposed metal surfaces to sweat, further degrading the insulation and equipment cooling capacity.

**DO NOT ALLOW FLEXIBLE DUCTING TO GET SQUEEZED OR ALLOW THE INSIDE DIAMETER DECREASE DUE TO VERY SHARP TURNS.**

### General Duct Recommendations

- Provide support for the flexible duct to prevent sags and bends.
- 3500tiR & 5000tiR Duct Size: 8" Supply and Return
- 8000tiR Duct Size: 8" Supply and 10" Return
- Stretch out the duct to make a smoother interior which reduces air resistance.
- Maximum duct length is 25'.
- For 90° bends, use a 90° adjustable elbow.
- No more than two 90° bends on each duct. Sweep 90° bends are recommended rather than sharp 90° bends.
- Generously apply duct sealant to all metal seams to fill in gaps that can leak air. Allow sealant to dry until firm to the touch before applying fiberglass insulation.
- Do not squeeze or reduce the inside diameter of the ducts as this will reduce airflow.
- Use short and straight ductwork where possible.
- Check that all fan blades move freely.
- Keep air paths free of loose foreign objects and debris.
- To provide adequate airflow the fan speed must be set to high when the unit is ducted.

### Location of Supply and Return Grilles

Locate the supply and return grilles inside the cellar to create an airflow pattern that maximizes air circulation in the room. Avoid short circulation of the air.

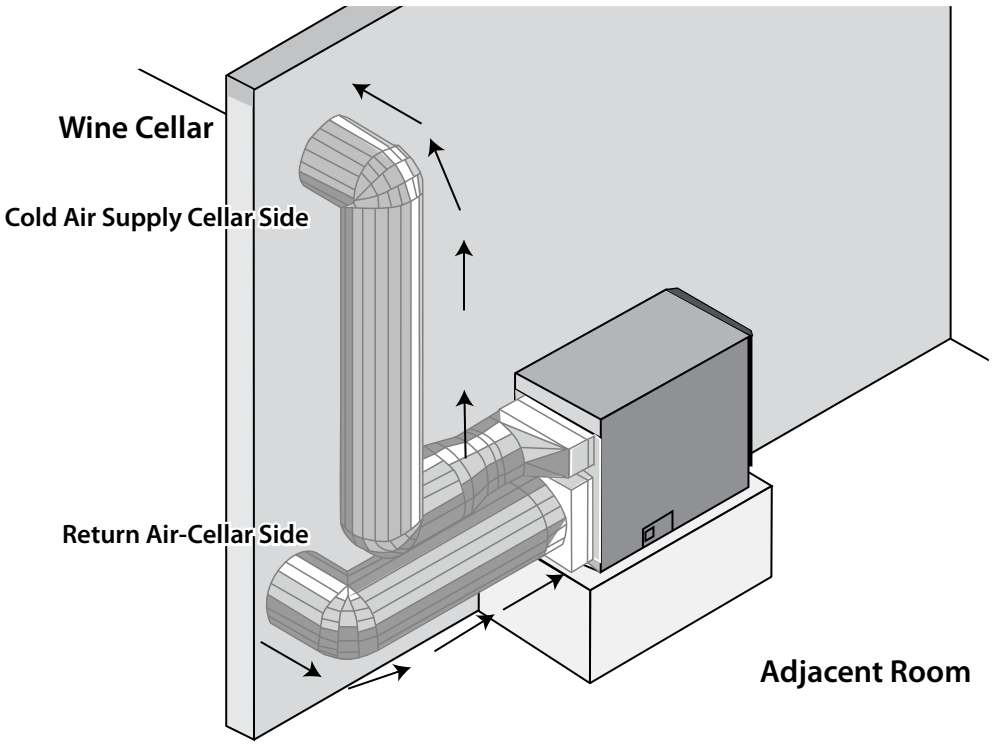
### Do not:

- Install through-the-wall return air grilles at floor level, as they will collect dust from the floor.
- Mount the unit lower than 18" from the ceiling.
- Locate the supply or return air grille where it is blocked by bottles, boxes or cases.

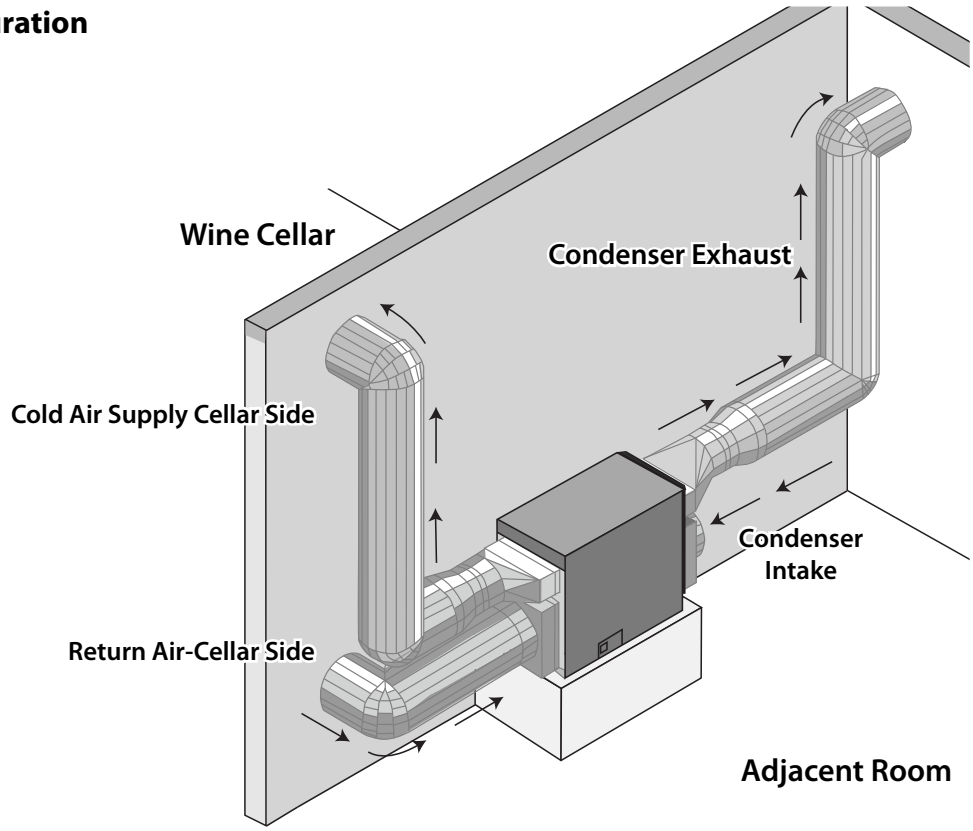
# DUCTING CONFIGURATIONS

There are a variety of ways to duct this unit, please review the different configurations to determine a basis for your particular installation. Remember to contact a wine cellar professional if you have any questions.

**Half Duct Configuration**

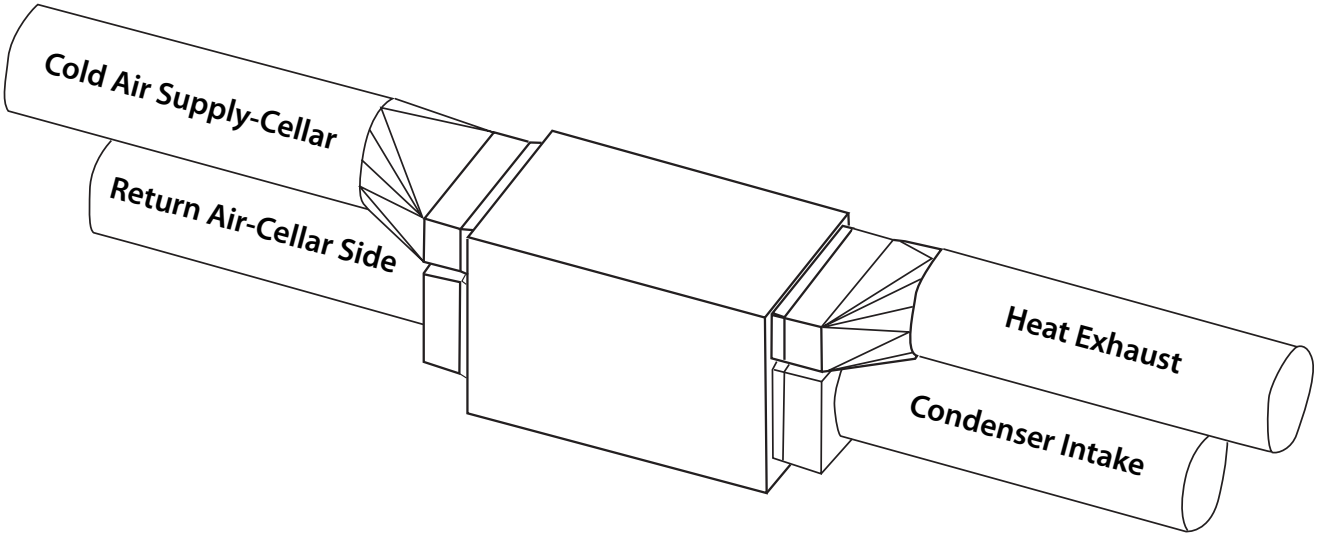



**Three-Quarter Duct Configuration**



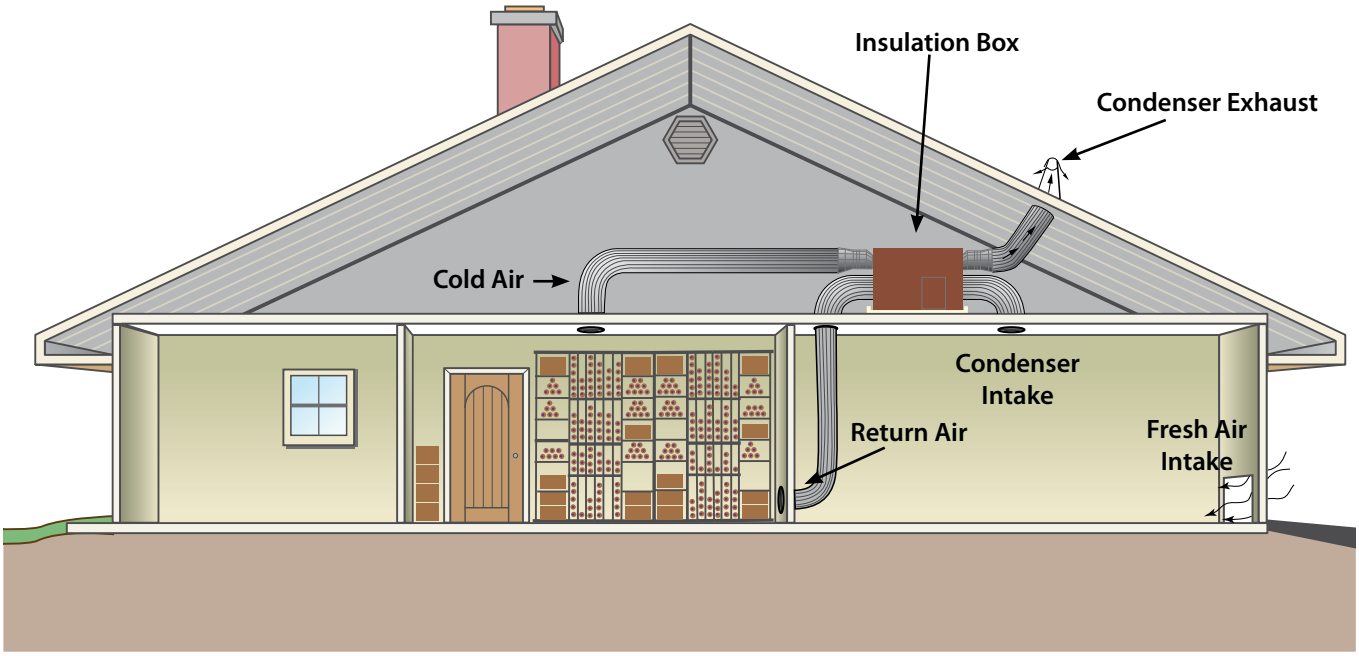
# DUCTING CONFIGURATIONS

## Fully Ducted




## Attic Mounted Unit

It is recommended to use our Insulation Box and Condensate Pan for this application.

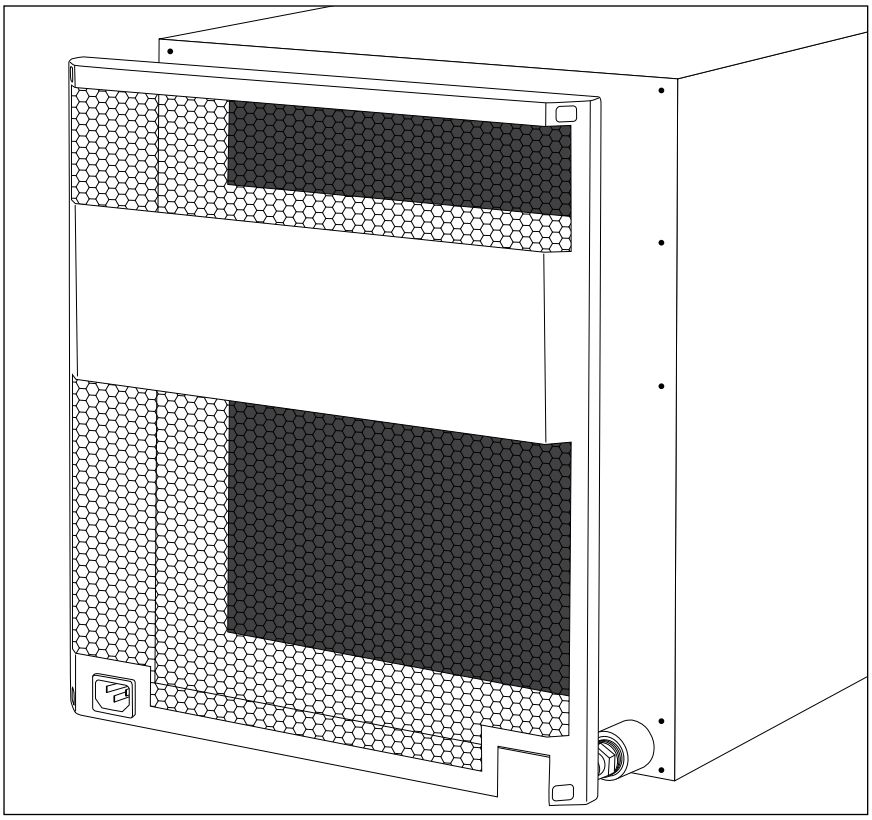


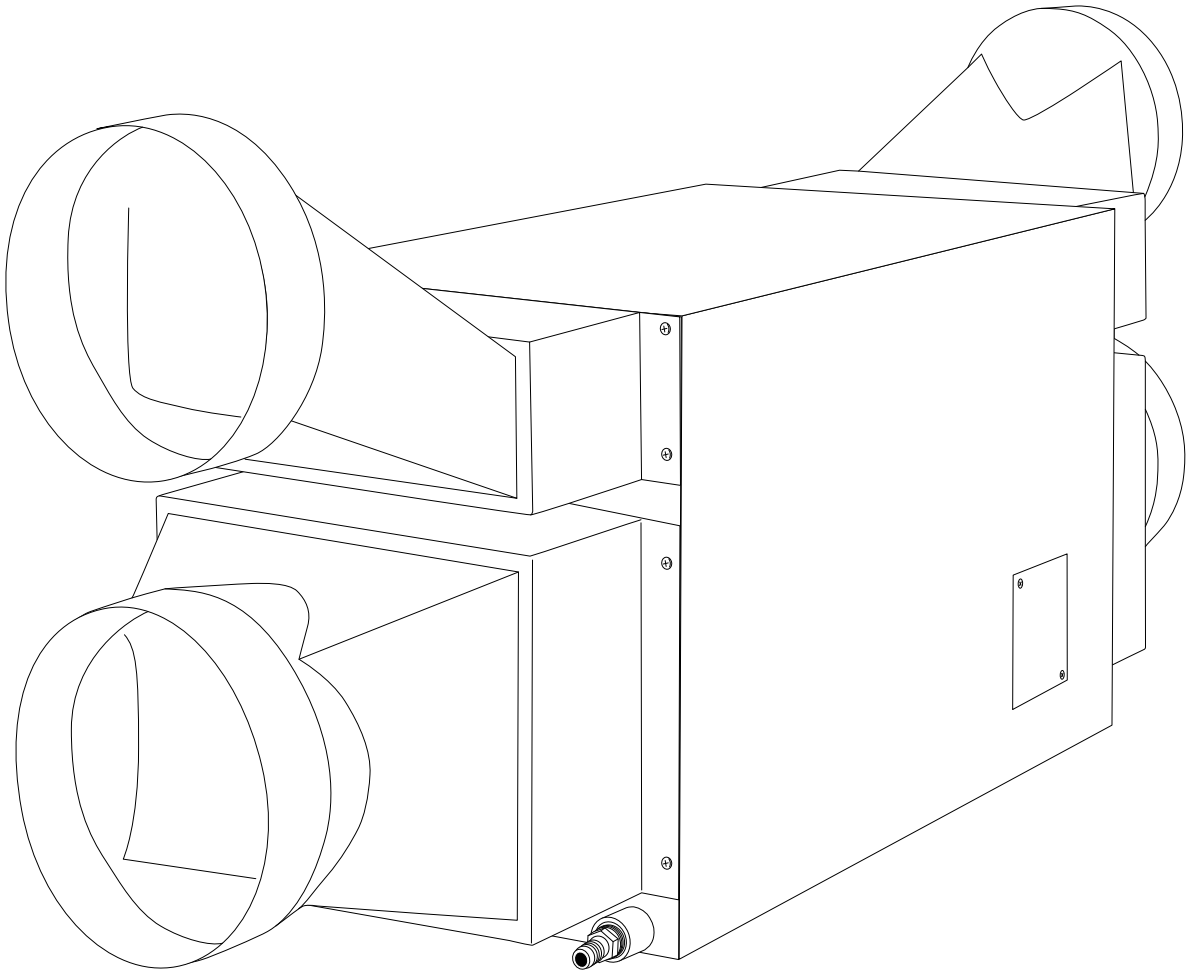
# INSTALLING THE DUCT PLENUMS

**STEP 1:**
Remove the filter grill from the unit by unscrewing the screws that hold it in place.

**STEP 2:**
Move the Ducting Adapters into place

**STEP 3:**
Screw the ducting adapters into place using the supplied screws.



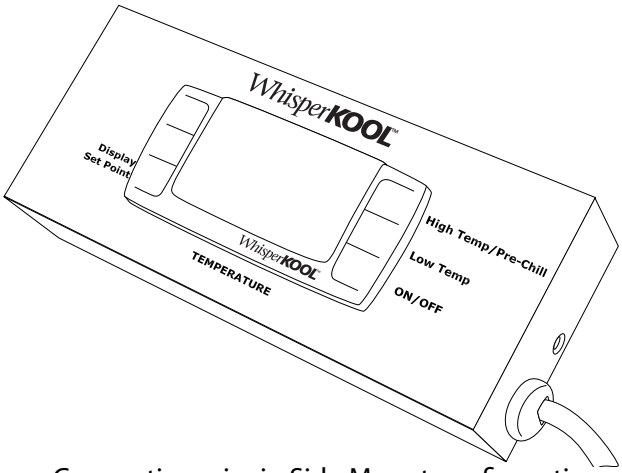


# REMOTE CONTROLLER INSTALLATION

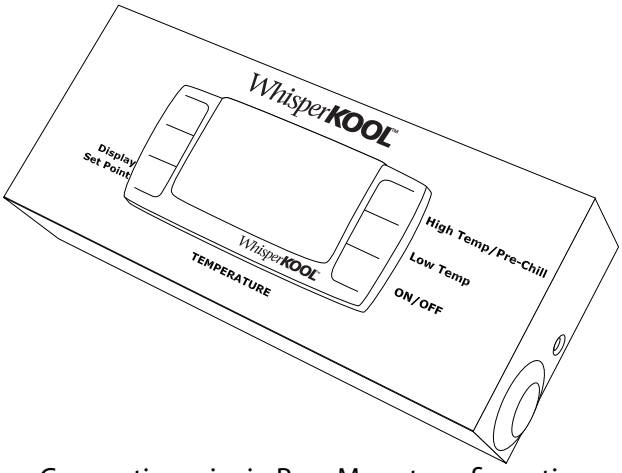
If you have a unit with a remote controller (tiR), please review this section.

The controller can be installed up to 50 feet away from the cooling unit, or up to 300 feet away with the extended connection wire available from WhisperKOOL.

First you will need to determine how you will be routing the connection wire into the controller box.

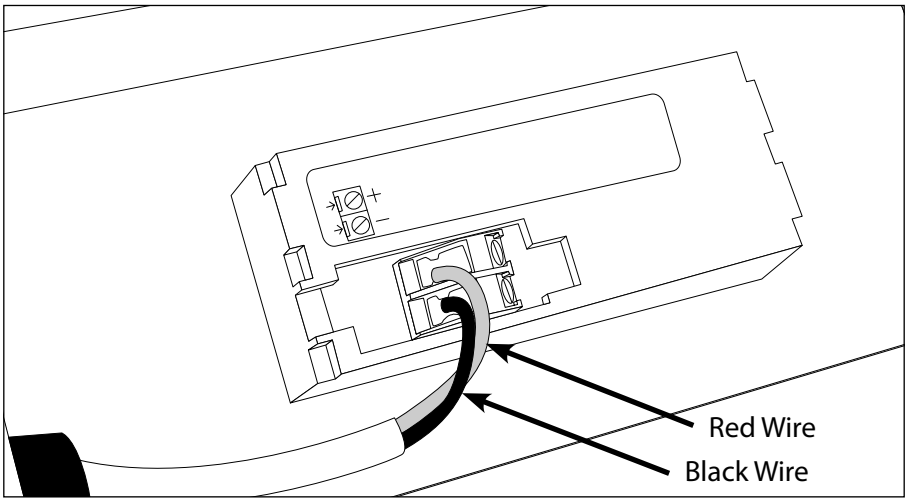



Connection wire in Side Mount configuration

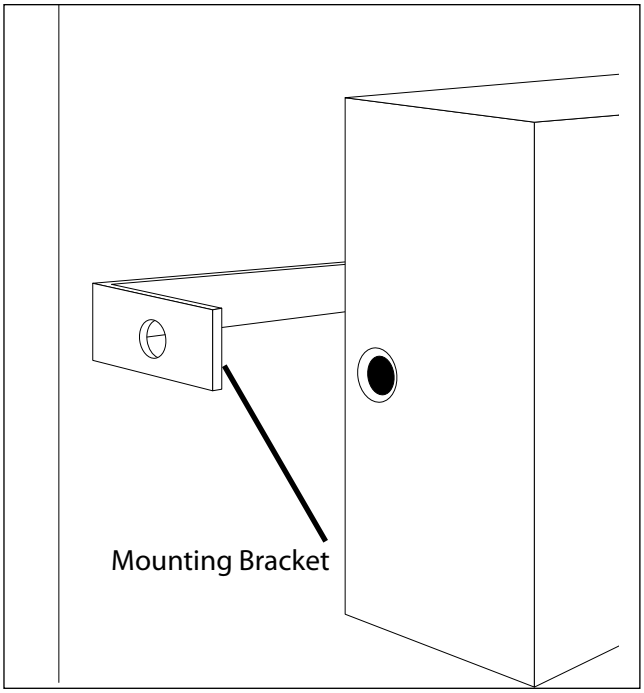


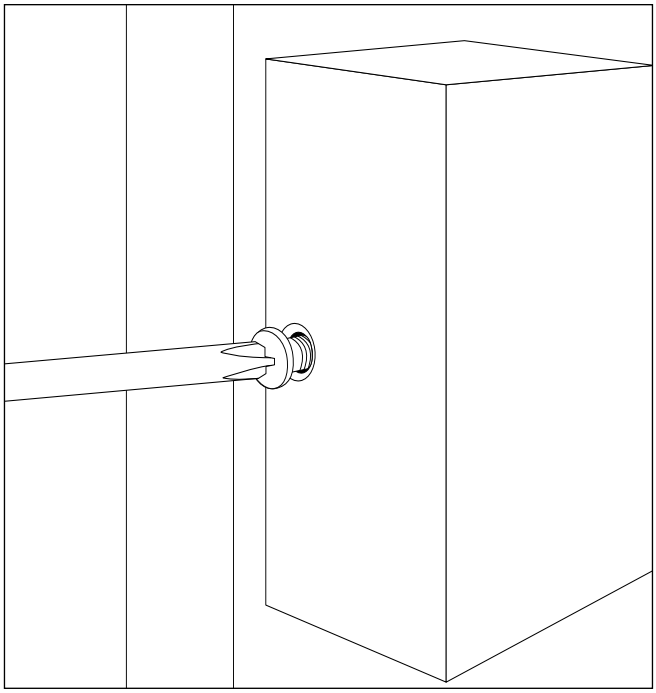

Connection wire in Rear Mount configuration

Attach the connection wire as shown below, with the red wire in the upper connection slot and the black wire in the lower slot.

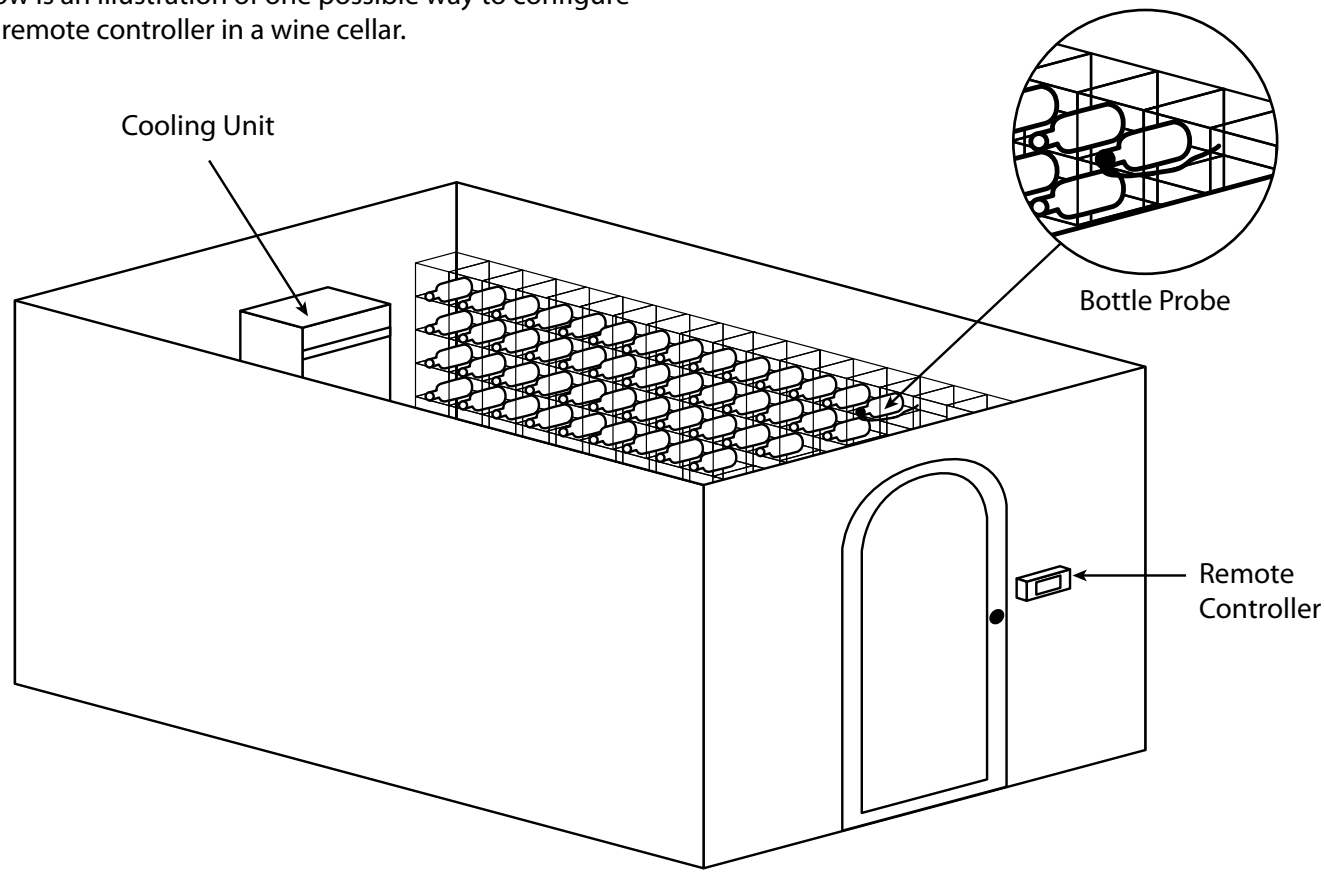


Remove the mounting bracket and secure the bracket to the wall in the desired location. Reattach the controller to the bracket.



Below is an illustration of one possible way to configure the remote controller in a wine cellar.

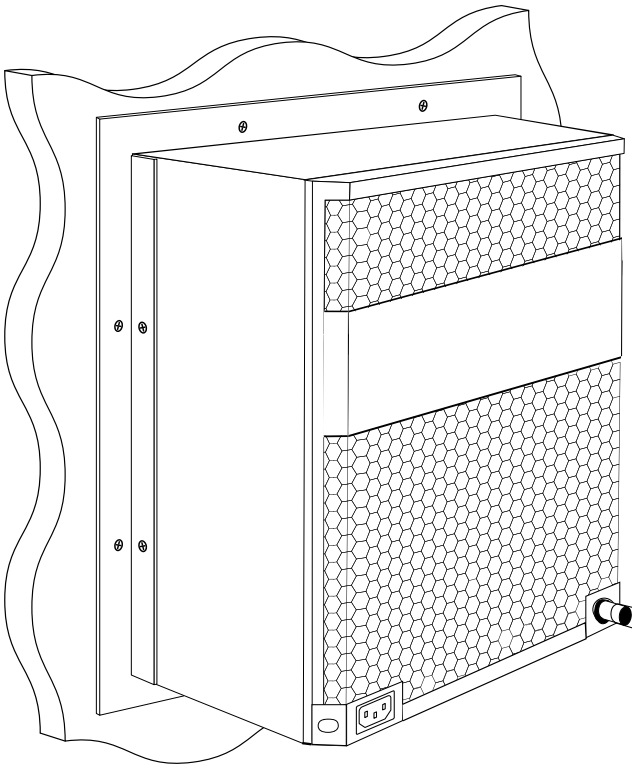


# DRAIN LINE

**Condensation Drain Line Tube**

The condensation drain line tube is used to remove excess condensation from the unit to a proper discharge location. It is important that the drain line tube is properly connected and used to prevent leakage and other problems associated with excess condensation.

**Failure to use the condensation drain line tube will void the warranty on the unit.**

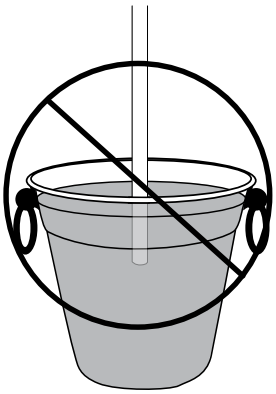



**Drain Line**

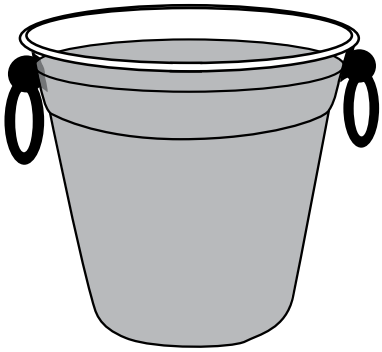
All units come with a drain line for additional removal of excessive condensate. It is mandatory to install the drain line with "T" fitting. During operation, the cooling unit will strip excess water from the air in order to maintain the proper level of humidity within the cellar. However in extreme humidity, additional condensate will be removed. Thus the drain line will prevent overflow and leaking by allowing for discharge of the additional condensate.

**Failure to install the drain line voids the warranty.**

**To prevent mold from growing, allow the drain line to hang above the water line.**



**WRONG:** Drain line is under water.



# LIQUID MEASURING THERMOSTAT

The WhisperKOOL Series cooling units come equipped with a liquid temperature measuring thermostat. This incorporates the following advantages:

### Self-Calibrating Probe

The probe contains a sensor chip, which actually communicates back and forth to the thermostat. This results in a consistent temperature setting and accuracy.

Measuring liquid temperature has a few unique advantages:

1. Wine temperature is kept in a very precise controlled environment. This assures a consistent temperature.
2. By measuring the liquid temperature rather than air, the unit will operate 75- 80% of the time.

### Liquid Measuring Thermostat

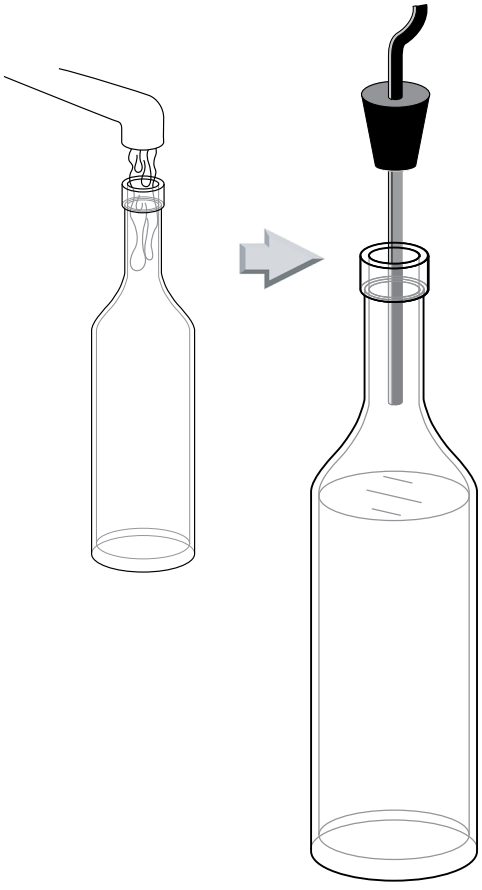
To assure a consistent temperature, place bottle probe approximately 3 feet away from the air output and not in the flow of the air.

**To Use the thermostat:**

1. Locate an empty wine bottle.
2. Fill 3/4 full with room temperature tap water.
3. Place bottle probe securely into bottle.
4. Place bottle with probe level and to the side of the unit in your wine cellar. ***It is recommended that it is placed in a central location of your wine cellar.*** Avoid pulling too much on the probe cord. It may become disconnected resulting in non-operation of the unit.

**Note:** The thermostat can be set between 50°F and 67°F.

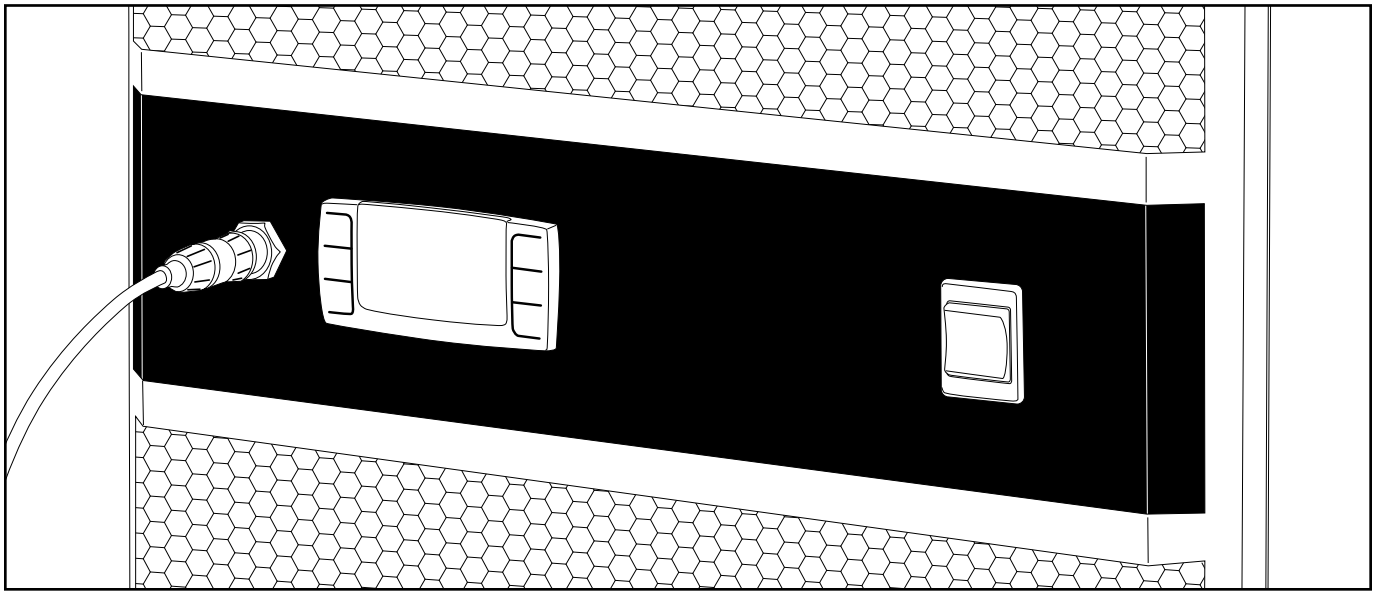
**Remember:** The WhisperKOOL unit operates based on the temperature of the water. Do not be misled by thermostats reading air temperature. The air temperature in the cellar will be cooler than the liquid temperature of the wine while it is coming to optimum balanced temperature.



# MULTI FAN SPEED CONTROL

Designed for wine cellars up to 1000 and 2000 cubic feet, the Extreme 3500ti/tiR, 5000ti/tiR and 8000ti/tiR feature multi-speed fans with a "high" setting for maximum performance in high-temperature (+110°F) environments and a "low" setting for super-quiet operation.

**Fan Speed Selector Switch (Low/Med/High):** The cooling unit fans operate on 3 speed settings: Low, Medium, and High. For optimum sound and energy efficiency, select the lowest fan speed that will maintain the desired cellar temperature. If the relative humidity is low, a higher fan speed will cause less moisture to be removed during cooling. High speed is recommended for initial cellar cool down, extreme temperature conditions and ducted installations.



Your fan speed selection will depend on the amount of heat that needs to be removed from the cellar and the application of the unit (through a wall or fully ducted). Fan speed selection will depend on the cellar size, insulation factor, door seal and desired wine temperature. When initially installing the unit, set the fan speed to **High** setting for a quick chill down. Once the temperature of the cellar reaches the desired temperature, you may be able to select a lower fan speed to handle the normal load. In the event the temperature outside goes above 90 degrees, (when exhausting to the outside) you may need to select the higher fan speed.

**Fully ducted units need to be set and stay in the High fan speed position.**

| Model | 3500ti & 3500tiR | | | 5000ti & 5000tiR | | | 8000ti & 8000tiR | | |
|---|---|---|---|---|---|---|---|---|---|
| **Speed Selection** | **Low** | **Med** | **High** | **Low** | **Med** | **High** | **Low** | **Med** | **High** |
| **Air Flow** (CFM) | 147 | 180 | 256 | 147 | 180 | 256 | 274 | 318 | 333 |
| **Sound** (dBA In Cellar / Out of Cellar) | 51/51 | 58/57 | 66/65 | 51/51 | 58/57 | 66/65 | 57/57 | 59/59 | 60/61 |
| **Cooling Capacity** (BTU/h) | 2374 | 2514 | 2688 | 2967 | 3142 | 3360 | 5140 | 5606 | 5760 |

* To get a feeling for decibels, a food blender at 3ft is 90 dBA, garbage disposal at 3ft is 85 dBA, vacuum cleaner at 10ft is 75 dBA, normal speech at 3ft is 79 dBA, dishwasher in the next room is 55dBA, Quiet night is 35dBA

# Unit OPERATION:
# Standard and Remote Controls

**Initial Start-Up**
When power is applied to the unit, the control will briefly display all symbols, and the Compressor symbol will be displayed (if unit is calling for cooling). There may be a brief delay prior to the evaporator and condenser fans turning on. When the evaporator and condenser fans are activated the "FAN" symbol will turn on.

**Normal Unit Cycle**
After the bottle probe has reached the set point (all units are shipped with the set point of 55°F and a differential of 1°F), the unit will turn off. The WhisperKOOL Humidity Management (WHM) is an adjustable feature which allows the customer the convenience of managing the humidity enhancement of their wine cellar. The WHM is one of the many Customer Preference Selection features which allow the customer the ability to fine tune the controls. Feature is off from the factory but can be turned on with the "FON" parameter.

**Anti Short Cycle**
The Anti Short Cycle ensures that the compressor will remain off for a period of 3 minutes after the unit has reached the set point to allow the pressure in the refrigeration unit to equalize prior to starting the compressor.

**Anti Frost Cycle**
The Anti Frost Cycle is a precautionary measure, as icing or frosting of the coil does not occur during normal operation. The unit will go through an anti frost cycle when the evaporator temperature reaches 26°. During the Anti Frost cycle, the unit will stop cooling and run the indoor fan to provide air flow across the indoor coil, which will melt any frost accumulation.

**Bottle Probe Failure Protection**
In the event that a bottle probe should fail, the APST (Advance Product Safety Technology) will automatically transition the Refrigeration Compressor cycles to a pre-determined time series (based on detailed laboratory testing), which will ensure that the product is kept within the safe range.

**Remote Control (optional)**
The control panel can be installed or mounted separately from the cooling unit itself (remotely), using the supplied cable. This option provides unique flexibility for installing the Extreme Series cooling unit in your wine cellar. The remote option must be specified when the unit is ordered.
**Note**: Remote Control is generally standard with a "Ducted Unit".

**Ducting and Ventilation Options**
The ventilation system is ideal for ducting. The optional collars fit standard ventilation ducting allowing the installer to vent air to and from the unit for optimum performance (please see specifications for details).

# STANDARD CONTROLLER FUNCTIONS

**If your unit is installed through the wall and does not have a remote keypad you will have the Standard Controller.**

| Button/Symbol | Normal Functions |
|---|---|
| **ON/OFF** | • The ON/OFF button allows the customer the convenience of turning the refrigeration unit ON or OFF, from the control panel. This feature does not disconnect power from the unit. In order for the power to be shut off from the unit, the power cord must be unplugged from the wall receptacle.<br>• Press the ON/OFF button once for button application. |
| **Up and Down Arrows** | • Use these buttons to scroll up or down the CPSM (Customer Preference Selection Mode) menu.<br>• Displays the Highest and Lowest temperature sensed by the Bottle Probe. This feature allows the customer instant access to the recorded data applicable to the Bottle Probe Temperatures, it can be easily reset to reflect current temperatures.<br>1. Press the "UP" arrow, or the "Down" arrow once, and the Highest or Lowest Temperature (Hi/Lo) sensed by the Bottle Probe, will be displayed.<br>2. To reset the Hi/Lo, press and hold the "Set" button when the Hi/Lo value is displayed on the Digital Display, continue to hold the "Set" button until "rst" appears on the digital display and then blinks. This will erase the past recorded "Temperature Data History" and start recording, from the current time and temperature, forward. Temperatures displayed would reflect Bottle Probe Temperatures from that point in time, and beyond.<br>3. The Hi/Lo feature should be reset at initial "Start-Up" and after the Cellar or Cabinet has obtained normal operating temperatures, which is generally 55°F. |
| **Cellar PreChill (CPC)** | The CPC Feature is activated by pressing the Up button for 3-5 seconds, and the CPC logo will be displayed on the digital display. The CPC feature can be terminated by pressing the Up button for 3-5 seconds, or the feature will self terminate after 6 hrs.<br>1. The (CPC) Feature may be used to Pre-Chill the Cellar prior to loading it with Warm Product. The feature will shift the Set Point down to a lower setting of 52°F, for the next 6 hours. After the 6 hour time period, the Set Point will automatically return to the original Set Point.<br>2. The CPC feature can be conveniently adjusted to the customer's specific needs, by accessing the "Customer Preference Select Mode" (CPSM). See Customer Preference Select Mode Instructions. |
| **Energy Reduction (ER)** | 1. The ER feature is activated by pressing the ER button one time, and the ER logo will appear on the digital display.<br>2. The purpose of the ER feature is to reduce energy cost, by shifting the Set Point up by 4 degrees, which will allow the cooling unit to run for shorter periods of time, resulting in a reduction in energy cost.<br>3. The ER feature allows for Energy Savings at any time - During periods of high ambient temperatures, vacations or business travel.<br>4. To deactivate the ER feature, press the ER button one time, and the ER logo will turn off.<br>5. The ER feature can be conveniently adjusted specific need by accessing the "Customer Preference Select Mode" (CPSM). See CPSM Instructions on page 29. |

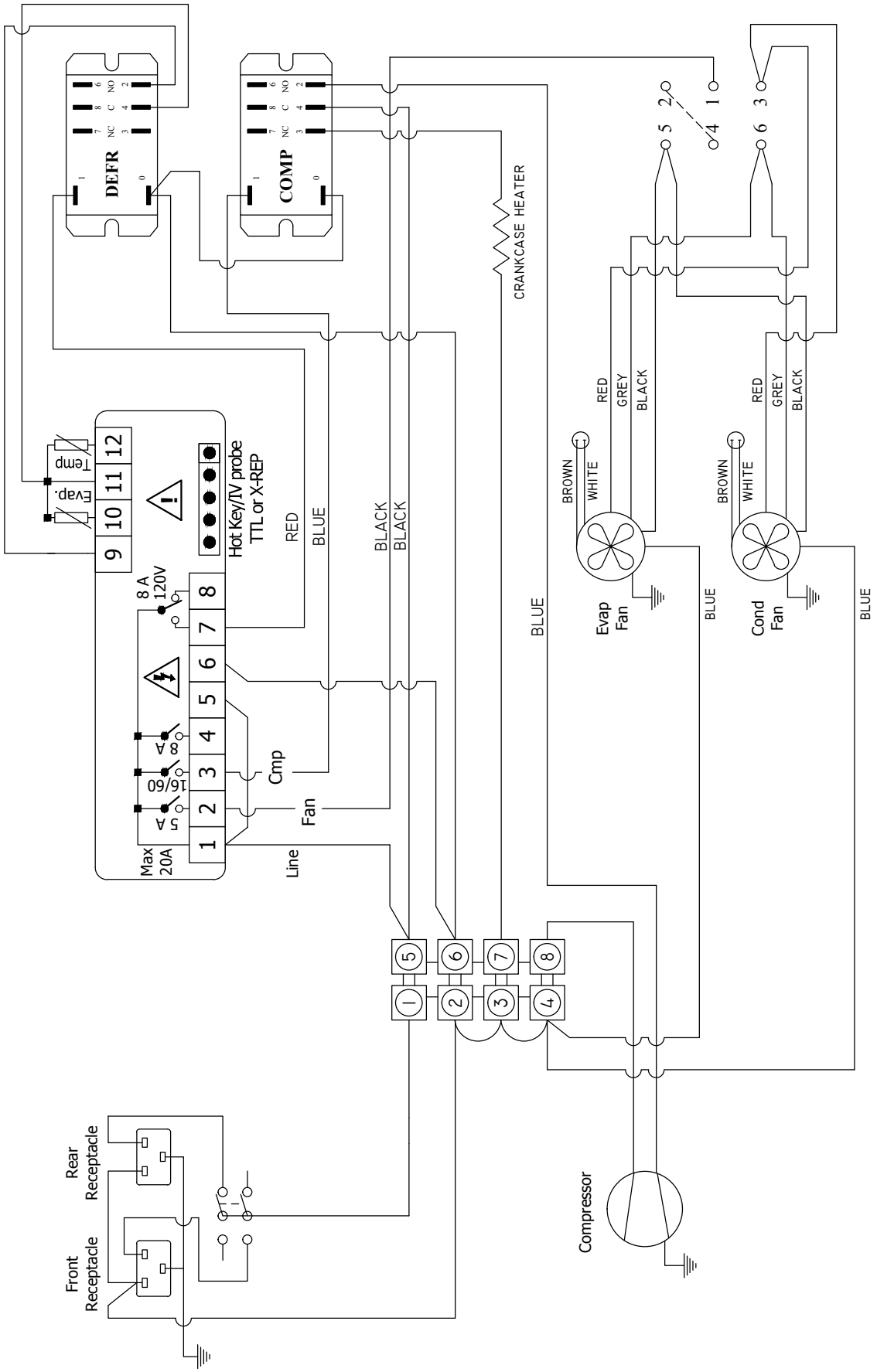
| | |
|---|---|
| **SET**<br>SET | 1. Press the "Set" button once and it will display the Set Point. After approximately 5 seconds, the display will return to normal operation and display the Bottle Probe temperature.<br>2. **Standard Controller** - Press and hold the "Set" button for 3-5 seconds until the set point is displayed and the °F symbol starts blinking. Next press the "UP or Down" arrows to change the Set Point. Next press the "Set" button once and the Set Point numbers and the °F on the display will blink to confirm the new Set Point setting.<br>3. Press and hold the "Set" button during the display of the Hi/Low "Temperature Data History" (hold button unit "rst" blinks on display), and it will erase the past recorded data file and start recording, from the current time and temperature.<br>4. Press the "Set" and the "Down Arrow" buttons simultaneously, for **10-15 seconds**, and you will access the "Customer Preference Selection Mode" (CPSM). The CPSM allows the customer to "Fine Tune" the Control Operating System to their applicable choice. |
| **Anti-Frost**<br>AUX | The Anti-Frost Cycle is automatically activated when the evaporator temp has reached a low temp of 26° and has sustained that temp for a period of five minutes. During this cycle the compressor and condenser fans will turn off and the evaporator fans will continue to run. Once the temperature of the evaporator gets back up to 40° the cycle will deactivate and the unit will revert back to normal operating conditions.<br><br>At the beginning of the cycle the AUX symbol will be illuminated and the symbol illuminated during the anti-frost cycle. |
| **Alarm** | The Alarm symbol is shown when the unit encounters an issue that needs attention, the displayed alarm codes are explained below. |

## Alarm Codes

| Message | Cause | Solution |
|---|---|---|
| "P1" | Bottle Probe is Unplugged | Attach Bottle Probe to Unit |
| | Faulty Bottle Probe Connection | 1. Check Bottle Probe attachment at circular connector<br>2. Check Bottle Probe connection at green terminal block on back of controller |
| | Defective Bottle Probe | Replace the Bottle Probe |
| "P2" | Faulty Evaporator Probe Connection | Check Evaporator Probe connection at green terminal block on back of controller |
| | Defective Evaporator Probe | Replace the Evaporator Probe |
| "HA" | Defective Bottle Probe | Replace the Bottle Probe |
| "LA" | The Bottle Probe is sensing a temperature of 4° below the set point | Allow the room to warm up which will increase the temperature of the wine |
| | Defective Bottle Probe | Replace the Bottle Probe |
| "POF" | The keypad is locked | Hold "Up" and "Down" buttons for 3 to 5 seconds to disable, "PON" should appear |

| | |
|---|---|
| CPSM Mode | Press the "Set" and the "Down Arrow" buttons simultaneously, for **10-15 seconds**, and you will access the "Customer Preference Selection Mode" (CPSM). The CPSM allows the customer to "Fine Tune" the Control Operating System to their applicable choice.<br><br>The following CPSM options are available for adjustment:<br><br>Fon – Humidity Management Enhancement: This parameter is normally set at 0, which should provide adequate relative humidity for the cellar.<br>• An increase in this parameter will increase the Humidity Enhancement (%RH), and a decrease in the parameter will decrease Humidity Enhancement (%RH).<br>• Adjustments should be made in increments of 5, with a maximum of 15, and a minimum of 0.<br>• After any adjustment to Humidity Enhancement, **you should wait a minimum of three days** before making any additional adjustments. This will allow the cellar sufficient time to acclimate to the new setting.<br><br>Fof - Humidity Management Enhancement: This parameter is normally set at 15. This parameter should not be adjusted, as it simply provides an OFF cycle time for the fan, during the compressor OFF cycle. However, the parameter is located within the CPSM as a convenience to the customer, should it need to be adjusted.<br><br>CCS – Cellar Pre-Chill Set Point: This parameter is set at 52°f, but can be adjusted to a set point between 50°f - 67°f.<br><br>CCT - Cellar Pre-Chill Duration: This parameter is set to 6 hours, but can be changed between 0-23.5 hours.<br><br>Con/Cof – Compressor On time (Con) and Off time (Cof) with a Probe 1 failure/Alarm. These parameters are set at Con 40 min/Cof 10 min. In the event that there is a Probe 1 failure/Alarm, the compressor/refrigeration system automatically starts a predetermined ON/OFF cycle, which is controlled by the Con and the Cof parameters. The customer can adjust these parameters to maintain the desired Bottle temperature.<br><br>Hes – Differential for Energy Reduction – This parameter is set at 4° above the set point, during the Energy Reduction mode. A decrease in this setting will decrease the set point, and an increase in this feature will increase the set point. |

# STANDARD WIRE SCHEMATIC



# REMOTE CONTROLLER FUNCTIONS

**If your unit has a remote keypad then you will have the Remote Controller.**

**TEMPERATURE**

| Button | Normal Functions |
|---|---|
| **ON/OFF** | • The ON/OFF button allows the customer the convenience of turning the refrigeration system ON or OFF, from the control panel. This feature does not disconnect power from the unit. In order for the power to be shut off from the unit, the power cord must be unplugged from the wall receptacle.<br>• Press the ON/OFF button once for button application. |
| **Up and Down Arrows** | • Use these buttons to scroll up or down the CPSM (Customer Preference Selection Mode) menu.<br>• Displays the Highest and Lowest temperature sensed by the Bottle Probe. This feature allows the customer instant access to the recorded data applicable to the Bottle Probe Temperatures, it can be easily reset to reflect current temperatures.<br>1. Press the "UP" arrow, or the "Down" arrow once, and the Highest or Lowest Temperature (Hi/Lo) sensed by the Bottle Probe, will be displayed.<br>2. To reset the Hi/Lo, press and hold the "Set" button when the Hi/Lo value is displayed on the Digital Display, continue to hold the "Set" button until "rst" appears on the digital display and then blinks. This will erase the past recorded "Temperature Data History" and start recording, from the current time and temperature, forward. Temperatures displayed would reflect Bottle Probe Temperatures from that point in time, and beyond.<br>3. The Hi/Lo feature should be reset at initial "Start-Up" and after the Cellar or Cabinet has obtained normal operating temperatures, which is generally 55°F. |
| **Cellar PreChill (CPC)** | The CPC Feature is activated by pressing the Up button for 3-5 seconds, and the CPC logo will be displayed on the digital display. The CPC feature can be terminated by pressing the Up button for 3-5 seconds, or the feature will self terminate after 6 hrs.<br>1. The (CPC) Feature may be used to Pre-Chill the Cellar prior to loading it with Warm Product. The feature will shift the Set Point down to a lower setting of 52°F, for the next 6 hours. After the 6 hour time period, the Set Point will automatically return to the original Set Point.<br>2. The CPC feature can be conveniently adjusted to the customer's specific needs, by accessing the "Customer Preference Select Mode" (CPSM). See Customer Preference Select Mode Instructions. |

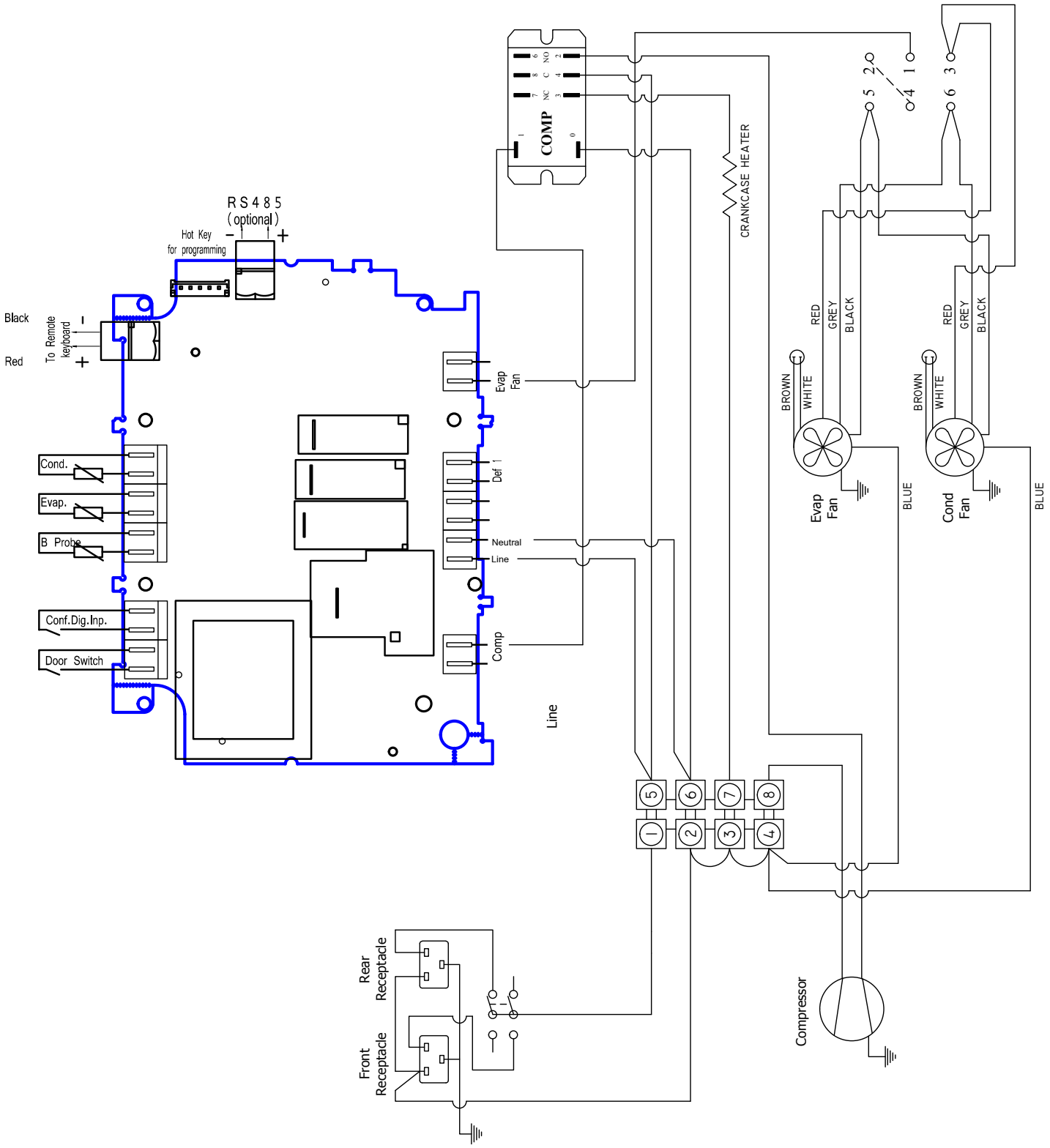
| | |
|---|---|
| **Set**<br>SET | 1. Press the "Set" button once and it will display the Set Point. After approximately 5 seconds, the display will return to normal operation and display the Bottle Probe temperature.<br>2. Press the "Set" button once and it will display the Set Point. Press the up and down arrows to change the set point. Press the Set button again and the numbers will blink, confirming the change in Set Point.<br>3. Press and hold the "Set" button during the display of the Hi/Low "Temperature Data History" (hold button unit "rst" blinks on display), and it will erase the past recorded data file and start recording, from the current time and temperature.<br>4. Press the "Set" and the "Down Arrow" buttons simultaneously, for **3-5 seconds**, and you will access the "Customer Preference Selection Mode" (CPSM). The CPSM allows the customer to "Fine Tune" the Control Operating System to their applicable choice. |
| **Alarm** | The Alarm symbol is shown when the unit encounters an issue that needs attention, the displayed alarm codes are explained below. |

## Alarm Codes

| Message | Cause | Solution |
|---|---|---|
| **"P1"** | **Bottle Probe is Unplugged** | **Attach Bottle Probe to Unit** |
| | **Faulty Bottle Probe Connection** | **1. Check Bottle Probe attachment at circular connector<br>2. Check Bottle Probe connection at green terminal block on back of controller** |
| | **Defective Bottle Probe** | **Replace the Bottle Probe** |
| **"P2"** | **Faulty Evaporator Probe Connection** | **Check Evaporator Probe connection at green terminal block on back of controller** |
| | **Defective Evaporator Probe** | **Replace the Evaporator Probe** |
| **"HA"** | **Defective Bottle Probe** | **Replace the Bottle Probe** |
| **"LA"** | **The Bottle Probe is sensing a temperature of 4° below the set point** | **Allow the room to warm up which will increase the temperature of the wine** |
| | **Defective Bottle Probe** | **Replace the Bottle Probe** |
| **"POF"** | **The keypad is locked** | **Hold "Up" and "Down" buttons for 3 to 5 seconds to disable, "PON" should appear** |

| | |
|---|---|
| **CPSM Mode** | Press the "Set" and the "Down Arrow" buttons simultaneously, for **3-5 seconds**, and you will access the "Customer Preference Selection Mode" (CPSM). The CPSM allows the customer to "Fine Tune" the Control Operating System to their applicable choice.<br><br>The following CPSM options are available for adjustment:<br><br>Fon – Humidity Management Enhancement: This parameter is normally set at 0, which should provide adequate relative humidity for the cellar.<br>• An increase in this parameter will increase the Humidity Enhancement (%RH), and a decrease in the parameter will decrease Humidity Enhancement (%RH).<br>• Adjustments should be made in increments of 5, with a maximum of 15, and a minimum of 0.<br>• After any adjustment to Humidity Enhancement, **you should wait a minimum of three days** before making any additional adjustments. This will allow the cellar sufficient time to acclimate to the new setting.<br><br>Fof - Humidity Management Enhancement: This parameter is normally set at 15. This parameter should not be adjusted, as it simply provides an OFF cycle time for the fan, during the compressor OFF cycle. However, the parameter is located within the CPSM as a convenience to the customer, should it need to be adjusted. CCT - Cellar Pre-Chill Duration: This parameter is set to 6 hours, but can be changed between 0-23.5 hours.<br><br>Con/Cof – Compressor On time (Con) and Off time (Cof) with a Probe 1 failure/Alarm. These parameters are set at Con 40 min/Cof 10 min. In the event that there is a Probe 1 failure/Alarm, the compressor/refrigeration system automatically starts a predetermined ON/OFF cycle, which is controlled by the Con and the Cof parameters. The customer can adjust these parameters to maintain the desired Bottle temperature. |

# REMOTE WIRE SCHEMATIC



# MAINTENANCE SCHEDULE

| | |
|---|---|
| **Monthly** | **1. Check filters**<br>**2. Check for unusual noise or vibration**<br>**3. Check the drain line to see if it is above the waterline if draining into a vessel.** |
| **Quarterly** | **1. Clean Filters**<br>**2. Replace Filters on ducted units**<br>**3. Open access door and add chlorine tablets to drip tray. (3500ti/tiR & 5000ti/tiR only)** |
| **Annually** | **1. Replace filters if worn or plugged beyond cleaning.**<br>**2. Use a vacuum with brush attachment to clean coils. Be careful not to crush coil fins when cleaning.**<br>**3. Inspect for corrosion.**<br>**4. Check wiring connections and integrity of cords.**<br>**5. Examine duct work for cracks or possible leaks.**<br>**6. Pour a 50/50 bleach solution into the drain line every spring.** |

# TROUBLESHOOTING GUIDE

| Unit has ice forming on the evaporator | |
|---|---|
| **Possible Cause** | **Solution** |
| Evaporator filter and/or coil are dirty. | Clean filter and coil with a vacuum.<br>If coil is very dirty, use a small hand spray with a small amount of liquid dish washer detergent. Spray coil, let set for 5 min, then flush with fresh water. |
| There is something blocking the supply and or return air | Remove blockage |
| The evaporator fan is not turning on. | Call a service tech to troubleshoot |
| The unit has not gone through its anti-frost sequence, yet. | Check for ice in the depth of the coil. Melt with blow drier until coil is warm to the touch. Soak up water with a towel. |
| If unit continues to ice. | Observe ice formation pattern. If only part way up the coil face, unit could be low on refrigerant. If all the way up, the coil may be dirty or airflow is blocked. |
| **Unit does not run/power up** | |
| **Possible Cause** | **Solution** |
| Unit is not plugged in | Make sure the unit is plugged into an outlet |
| Power switch not on | Turn unit on by pressing the power button on the control |
| Line voltage is incorrect rating for unit | Check line voltage to make sure there is 110v/120v |
| Bottle at set point | Lower set point |
| Thermostat not calling for cooling | Lower set point |
| Power select switch in wrong position | See page 12 for correct switch position |
| Faulty thermostat or wiring | Call Customer Service at 1-800-343-9463 |
| **Cellar Temperature is to Warm** | |
| **Possible Cause** | **Solution** |
| The temperature or the room unit is exhausting to has exceeded 110° | Intake temperature needs to drop below 110°. |
| The unit is undersized for the cellar. | Order correct size unit |
| There is something blocking the supply and/or return air, on evaporator or condenser side of the unit | Remove air flow obstruction |
| Unit is mounted too low in the cellar | Re-Locate unit so the distance from the ceiling and top of the unit is no more than 18" |
| One or more of the fans is not turning on. | Call Customer Service at 1-800-343-9463 |
| Compressor is not turning on. | Call Customer Service at 1-800-343-9463 |
| Compressor keeps cycling on overload | Make sure all fans are working and there are no airflow obstruction. |
| Poor seal around door. | Make sure there are no air gaps around the door. If door seal is damaged, replace it. |
| Controller set too high | Lower the set point. |
| Evaporator coil is frosted or iced up | Observe ice formation pattern. If only part way up the coil face, unit could be low on refrigerant. If so, call Customer Service at 1-800-343-9463 |

# TROUBLESHOOTING GUIDE

| Unit leaks water | |
|---|---|
| **Possible Cause** | **Solution** |
| Unit is not level | Unit should be level in wall to prevent leaking |
| Drain line clogged or kinked | Check drain line to make sure water can flow freely. |
| Drain is clogged preventing water form escaping | Disconnect drain and clear out, open access door and check drain for blockage |
| Drain line does not have a downward slope | Fix Drain line so there is a downward slope from the unit to the drain. |
| Coil is iced causing drain pan ice and water overflowing | Melt ice with blow drier. Soak up with a towel |
| **Unit runs but does not cool** | |
| **Possible Cause** | **Solution** |
| Lack of air flow | Make sure fan is unobstructed; clean evaporator if necessary |
| Compressor not running | Call Customer Service at 1-800-343-9463 |
| Unit undersized | Call Customer Service at 1-800-343-9463 |
| Compressor is overheating | Shut unit off for 1 hour to allow compressor to cool. Turn back on and check for cooler air flow out. If compressor runs, check for and clean condenser coil as possible cause of compressor overheating. If problem repeats, call customer service. |
| **Evaporator fan runs but compressor does not** | |
| **Possible Cause** | **Solution** |
| Running an Anti-Frost Cycle | Check evaporator coil temp. |
| Compressor and/or starting components faulty | Call Customer Service at 1-800-343-9463. |
| Unit may be performing the WHM function | Allow cooling unit to revert back to cooling mode. |
| Compressor may have overheated. | Shut unit off for 1 hour to allow compressor to cool. Turn back on and check for cooler air flow out. If compressor runs, check for and clean condenser coil as possible cause of compressor overheating. If problem repeats, call customer service. |
| **Compressor runs but evaporator fan does not** | |
| **Possible Cause** | **Solution** |
| Faulty fan motor | Call Customer Service at 1-800-343-9463 |
| Faulty Controller | Call Customer Service at 1-800-343-9463 |
| **Compressor short cycles** | |
| **Possible Cause** | **Solution** |
| Evaporator blows on bottle probe | Move bottle probe to a more central location. |
| Unit low on refrigerant charge | Call Customer Service at 1-800-343-9463 |
| Condensing fan motor/capacitor faulty | Call Customer Service at 1-800-343-9463 |
| Compressor and /or starting components faulty | Call Customer Service at 1-800-343-9463 |
| **Humidity in cellar too low** | |
| **Possible Cause** | **Solution** |
| Not enough moisture | Raise the Fon setting to increase the humidity level |

# TECHNICAL ASSISTANCE

WhisperKOOL Customer Service is available Monday through Friday from 8:00 a.m. to 4:00 p.m. Pacific Time.

The customer service representative will be able to assist you with your questions and warranty information more effectively if you provide them with the following:

- The model and serial number of your WhisperKOOL Series Unit.
- Location of unit and installation details, such as ventilation, ducting, construction of your wine cellar, and room size.

**Contact WhisperKOOL Customer Service**

1738 E. Alpine Avenue
Stockton, CA 95205
www.whisperkool.com
Email: support@whisperkool.com
Phone: (209) 466-9463
US Toll Free 1-800-343-9463
Fax (209) 466-4606

# ACCESSORIES FOR COOLING UNITS

**WhisperKOOL offers accessories to enhance and customize your Extreme wine cooling unit.**

**Exterior Grille**

Protects the unit from the weather elements when placed on the exhaust side.
• Small Exterior Grille (used for Extreme 3500ti, 3500ti, 5000ti & 5000tiR)
• Large Exterior Grille (used for Extreme 8000ti & 8000tiR)

**Condensate Pump Kit**

The condensate pump kit is designed as an automatic condensate removal pump for water dripping out of our cooling units' drain line. The pump is controlled by a float/switch mechanism that turns the pump on when approximately 2-1/4" of water collects in the tank, and automatically switches off when the tank drains to approximately 1-1/4". The condensate pump kit allows the excess condensate to be pumped up to 20ft away from the unit.

**Extreme Ducting Plenum**

This plenum allows either side of the unit to be ducted. Duct the cold air through a vent into the cellar, duct the hot exhaust air out of the home. This plenum allows for total installation flexibility.

## Accessories can be purchased at www.whisperkool.com

**WhisperKOOL Product Terms and Conditions**
**Including Product Limited Warranty And Product Installation Requirements**
**For WhisperKOOL Cooling Units**

ATTENTION: PLEASE READ THESE TERMS OF USE CAREFULLY BEFORE INSTALLING YOUR WHISPERKOOL COOLING SYSTEM. INSTALLING YOUR WHISPERKOOL COOLING SYSTEM INDICATES THAT YOU ACCEPT AND AGREE TO EACH OF THE TERMS AND CONDITIONS SET FORTH HEREIN ("TERMS OF USE"). IF YOU DO NOT ACCEPT THESE TERMS OF USE, YOU RISK VOIDING YOUR WARRANTY AND ASSUMING ADDITIONAL REPAIR AND REPLACEMENT COSTS.

1. **Purchase of a WhisperKOOL Cooling System assumes that the Purchaser ("End User") fully accepts and agrees to the Terms and Conditions set forth in this document. The Terms and Conditions of Sale and Owner's Manual are shipped with each unit and, if another copy is needed, replacement copies can be downloaded from the company website (whisperkool.com) or by contacting WhisperKOOL directly for a new copy. WhisperKOOL reserves the right, in its sole discretion, to change its Terms and Conditions at any time, for any reason, without notice.**

**2. WhisperKOOL Product Limited Warranty:**

A. Two (2) Year Limited Warranty: For the period of TWO (2) YEARS (the "Limited Warranty Period") from the date of original sale of a Product by WhisperKOOL, if a WhisperKOOL Product is found to be defective in material or workmanship after undergoing WhisperKOOL's Customer Service troubleshooting, then, subject to the WhisperKOOL Product Limited Warranty Limitations and Exclusions as well as the other Terms and Conditions stated herein, WhisperKOOL will do the following, as appropriate, for the end user ("End User") who has installed and is actually using the Product, with regard to LABOR, PARTS and FREIGHT:

   1. **LABOR** — Repair or replace (at WhisperKOOL's sole option) the Product to the End User; and
   2. **PARTS** – Supply to the End User, new or rebuilt replacement parts for the Product in exchange for the return of defective parts; and
   3. **FREIGHT** – Cover normal ground freight charges for parts, and, in the event the Product is not repairable in the field, cover normal ground freight charges (within the continental United States) for the repair or replacement of the Product.

B. Five (5) Year Compressor Limited Warranty: WhisperKOOL Products' compressor only will be covered for five (5) years from date of purchase. Labor and freight of the compressor is the End Users responsibility.

C. Product Warranty Limitations and Exclusions:

   1. This limited warranty does not cover cosmetic damage caused during installation, damage due to acts of God, commercial use, accident, misuse, abuse, negligence, or modification to any part of the Product. Delivery and installation of the Product, any additional parts required, as well as removal of the Product if warranty work is required, are all at the sole cost, risk and obligation of the End User.
   2. This limited warranty does not cover damage due to improper installation or operation or lack of proper maintenance of the Product, connection of the Product to improper voltage supply, or attempted repair of the Product by anyone other than a technician approved by WhisperKOOL to service the Product.
   3. This limited warranty does not cover any Product sold "AS IS" or "WITH ALL FAULTS."
   4. Product that has been replaced during warranty period does not extend the warranty period past the original date of purchase.
   5. (5) This limited warranty is valid only in the continental United States. Sales elsewhere are excluded from this warranty.
   6. Proof of purchase of the Product in the form of a bill of sale, receipted invoice or serial number, which is evidence that the Product is within the Limited Warranty Period, must be presented by the End User to WhisperKOOL in order to obtain limited warranty service.

7. This limited warranty is void if the factory applied serial number has been altered or removed from the Product.
8. This limited warranty is voided if installed in an enclosure of insufficient design that does not follow the Product installation requirements stated herein and in the Owner's Manual.
9. Removing the rivets from the Product's unit housing without prior authorization from WhisperKOOL voids this limited warranty.
10. The End User must first contact WhisperKOOL Customer Service by telephone (at 1-800-343-9463) prior to attempting service on any Product still under the limited warranty; else the limited warranty is voided.
11. This limited warranty does not cover Product being concealed by, but not limited to; vegetation, fabric, shelving, mud, snow, or dirt. Product must not be painted or limited warranty will be void.
12. This limited warranty does not cover exposure to corroding environments such as, but not limited to; petroleum and gasoline products, cleaning solvents, caustic pool chemicals, and marine air.
13. This limited warranty does not cover any cause not relating to Product defect.
14. THE REPAIR OR REPLACEMENT OF THE PRODUCT AS PROVIDED UNDER THIS LIMITED WARRANTY IS THE EXCLUSIVE REMEDY OF YOU, THE END USER, AS WELL AS ANYONE ELSE IN THE CHAIN OF TITLE OF THE PRODUCT, DOES NOT START A NEW LIMITED WARRANTY TIME PERIOD, AND IS IN LIEU OF ALL OTHER WARRANTIES (EXPRESS OR IMPLIED) WITH REGARD TO THE PRODUCT. IN NO EVENT SHALL WHISPERKOOL BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR CONTINGENT DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXPRESSLY DISCLAIMED. Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This limited warranty gives you specific legal rights, and you may have other rights, which vary from state to state.
15. Failure of the End User to comply with all of the Product Installation Requirements, Maintenance Requirements and End User Requirements may, at WhisperKOOL's sole discretion, void this limited warranty.
16. No one has any authority to add to or vary the limited warranty on this Product.

**3. Product Installation Requirements:**

A. Prior to installing a WhisperKOOL Product, the End User must read the WhisperKOOL Owner's Manual and thereafter the End User must follow the required installation, use and maintenance procedures set forth by WhisperKOOL in WhisperKOOL's Owner's Manual. The Owner's Manual is shipped with each Product and if another copy is needed, replacement copies can be downloaded from WhisperKOOL's website (www.whisperkool.com) or by contacting WhisperKOOL directly for a new copy of the Owner's Manual.

B. It is highly recommended that the End User obtain the assistance of a wine storage professional.

C. Failing to address all of the variables associated with proper installation will cause the Product to operate incorrectly and limit both the Product's ability to cool and the longevity of the Product itself.

D. The End User is responsible for all risks and costs of installation of the Product, including but not limited to all labor costs as well as cost of any additional parts required for the proper and complete installation of the Product. The End User is responsible for all risks and costs of removing the Product if limited warranty work is required.

E. The Product cannot operate at its optimum capacity if airflow is constricted by ducting or venting the exhaust side of the Product into a location with inadequate ventilation.

**4. Maintenance Requirements**

It is the End User's responsibility to clean off any accumulated dust, lint, or other debris from the front and rear intake grills. Failure to do this on a regular basis will restrict the airflow and may affect the Product's ability to function properly. Periodically cleaning the Product's vents will help assure maximum cooling efficiency. The drain line tube must also be checked and kept clean and free of debris and mold to maintain proper performance.

Mold is a natural living organism in the environment. It exists in the air in the form of microscopic spores that move

in and out of buildings through doors, windows, vents, HVAC systems and anywhere else that air enters. Once it is discovered, mold must be addressed quickly and appropriately. Delayed or improper treatment of mold issues can result in costly and reoccurring repairs. If the End User suspects a mold problem, it is always best to hire a qualified and experienced mold remediation specialist.

**5. Additional End User Costs And Responsibilities**

The following items are not covered under any warranty and are the sole responsibility of the End User:

A. End Users should satisfy themselves that the Product they are purchasing is suitable for their particular needs and requirements, and thus no responsibility will be placed with WhisperKOOL for the End User's decisions in this regard.

B. It is the End User's responsibility to secure safe haven/storage for ANY AND ALL items that are being kept and stored in the End User's wine cellar, including any Product. WhisperKOOL takes no responsibility for the safety and preservation of the aforementioned items in the event that the environment becomes unsuitable to maintain a proper storage environment.

C. End User is responsible for initial installation costs, including, but not limited to, labor costs and the cost of any additional parts necessary to complete the installation.

D. End User is responsible for all costs incurred for the installation and/or removal of the Product, or any part thereof, unless such cost has been agreed by WhisperKOOL to be a warranty repair prior to the work being performed.

**6. Sales and Use Tax**

WhisperKOOL only collects California sales tax for orders shipped within the State of California. WhisperKOOL does not collect sales tax for orders shipped to other states. However, the Purchaser and the End User may be liable to the taxing authority in their state for sales tax and/or use tax on the Product. The Purchaser and the End User should each check with their state's taxing authority for sales and use tax regulations.

**7. Customer Service and Troubleshooting**

WhisperKOOL's Customer Service department is available to answer any questions or inquiries for End Users regarding a WhisperKOOL Product, as well as to assist in performing basic troubleshooting, Monday through Friday, from 6:00 a.m. to 4:00 p.m. (PST), at 1-800-343-9463. WhisperKOOL Corporation is located at 1738 East Alpine Avenue, Stockton, California 95205.

**8. Miscellaneous Terms and Conditions**

A. Return Policy: All return inquiries must be made within thirty (30) calendar days of the original purchase of a Product and are subject to a twenty five percent (25%) restocking fee. Shipping costs are not refundable and the Purchaser is responsible for all return shipping costs (including customs fees and duties, if applicable).

B. Security Interest: WhisperKOOL retains a security interest in each Product until payment in full.

C. Construction and Severability: Every provision of these Terms and Conditions shall be construed, to the extent possible, so as to be valid and enforceable. If any provision of these Terms and Conditions is held by a court of competent jurisdiction to be invalid, illegal or otherwise unenforceable, such provision will, to the extent so held, be deemed severed from the contract of sale between Purchaser and WhisperKOOL, and all of the other non-severed provisions will remain in full force and effect.

D. Governing Law/Choice of Forum: The laws of the State of California (without regard for conflicts of law) shall govern the construction and enforcement of the these Terms and Conditions of Sale (Sections 1 through 9 inclusive, including Product Limited Warranty And Product Installation Requirements), and further these Terms and Conditions of Sale shall be interpreted as though drafted jointly by WhisperKOOL and Purchaser. Any dispute will be resolved by the courts in and for the County of San Joaquin, State of California, and all parties, WhisperKOOL, Purchaser and End User, hereby irrevocably submit to the personal jurisdiction of such courts for that purpose. No waiver by WhisperKOOL of any breach or default of the contract of sale (including these Terms and Conditions of Sale) concerning a Product will be deemed to be a waiver of any preceding or subsequent breach or default.

E. Correction of Errors and Inaccuracies: These Terms and Conditions may contain typographical errors or other errors or inaccuracies. WhisperKOOL reserves the right to correct any errors, inaccuracies or omissions, and to change or update these Terms and Conditions, at any time without prior notice.

**9. Questions, Additional Information And Technical Assistance**

A. Questions: If you have any questions regarding these Terms and Conditions or wish to obtain additional information, contact us via phone at 1-800-343-9463 or please send a letter via U.S. Mail to:

Customer Service
WhisperKOOL Corporation
1738 E Alpine Ave
Stockton, CA 95205

E-mail: support@whisperkool.com
Web: www.whisperkool.com

B. Technical Assistance: WhisperKOOL Customer Service is available Monday through Friday from 6:00 a.m. to 4:00 p.m. (PST). The Customer Service representative will be able to assist you with your questions and warranty information more effectively if you provide them with the following:

1. The model and serial number of your WhisperKOOL UNIT.
2. The location of the system and installation details, such as ventilation, construction of your wine cellar, and room size.

**Model** _____ **Serial Number** ___ ___ ___ ___ ___ ___

**Installed by** _____ **Date** _____

# NOTES

WhisperKOOL™

WhisperKOOL
1738 E. Alpine Ave
Stockton, CA 95205
1-800-343-9463
www.whisperkool.com

EXti 033114